TYPES AND COSTUMES—GROUP OF ZEIBEKS.

THE

EARTH AND ITS INHABITANTS.

ASIA

BY

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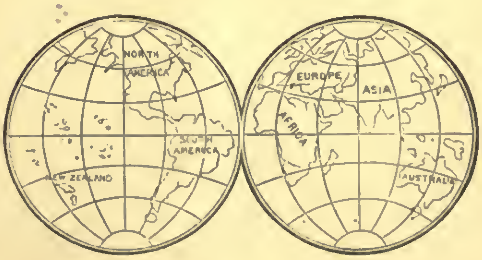
VOL. IV.

SOUTH-WESTERN ASIA.



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CONTENTS.

VOL IV.

CHAP.		PAGE
I.	General Survey	1
II.	Afghanistan Afghan Highlands, p. 19. River Systems, p. 26. Climate, Flora and Fauna, p. 31. Inhabitants, p. 33. *Topography*, p. 46.	16
III.	Baluchistan Highlands, p. 60. River Systems, p. 63. Climate, Flora and Fauna, p. 65. Inhabitants, p. 66. *Topography*, p. 70.	58
IV.	Persia Historic Retrospect, p. 75. Mountain Systems, p. 78. The Caspian Coastlands, p. 86. The Western Highlands, p. 91. The Central Deserts, p. 93. Hydrographic Systems, p. 95. Climate, Flora, Fauna, p. 101. Inhabitants, p. 104. *Topography*, p. 117. Social Condition, Administration, Prospects, p. 151.	75
V.	Asiatic Turkey Lazistan, Armenia, and Kurdistan, p. 163. Armenian Highlands, p. 165. Kurdistan Highlands, p. 167. Lake Van, p. 168. Climate, Flora, and Fauna, p. 169. Inhabitants: Lazes, Armenians, Kurds, p. 171. The Kizil-Bashes, Yezidis, and Nestorians, p. 177. Topography of Armenia and Kurdistan, p. 180.	162
VI.	Lower Kurdistan, Mesopotamia, Irak-Arabi Historic Retrospect, p. 193. North Mesopotamian Orographic System, p. 196. The Tigris Basin, p. 199. The Euphrates Basin, p. 201. The Shat-el-Arab and Euphrates Delta, p. 211. Climate, Fauna, and Flora of Mesopotamia, p. 213. Inhabitants—The Arabs and Kurds, p. 214. Topography of the Tigris Basin, p. 218. Topography of the Euphrates Basin, p. 230.	192
VII.	Asia Minor General Survey, p. 242. Anatolian Mountain Systems, p. 245. The Anti-Taurus and Cilician Taurus, p. 247. Isaurian and Lycian Taurus, p. 250. West Anatolian Coastlands and Islands, p. 254. North Anatolian Ranges, p. 200. The Anatolian Water Systems: The Yeshil-Irmak, Kizil-Irmak, and Sakaria, p. 262. Rivers flowing to the Ægean, p. 266. Lacustrine Basins and Rivers flowing to the Mediterranean, p. 273. Climate, Flora, and Fauna, p. 278. Inhabitants: Yuruks and Turks, p. 283. The Anatolian Greeks, p. 290. Topography, p. 294. Prospects of Anatolia, p. 343.	241

CHAP.		PAGE
VIII.	CYPRUS	344
	Mountains and Rivers, p. 346. Climate, Flora, and Faun, p. 347. Inhabitants, p. 348. *Topography*, p. 349.	
IX.	SYRIA, PALESTINE, SINAI	354
	Historic Retrospect, p. 354. Mountain Ranges: Libanon and Anti-Libanon, p. 356. Hermon, Hills of Galilee, Mount Carmel, p. 359. Trans-Jordan Uplands, p. 362. Sinai Highlands, p. 363. Rivers of Syria and Palestine, p. 367. The Jordan and Dead Sea, p. 370. Climate, Flora, and Fauna, p. 374. Inhabitants of Syria and Palestine, p. 376. The Ansarieh, Druzes, and Maronites, p. 377. The Melkites and Jews, p. 380. Topography of Syria, p. 382. Topography of Palestine, p. 409.	
X.	ARABIA	430
	Historic Retrospect, p. 430. General Survey, p. 433. Mountain Systems, p. 435. The Hejaz and Assir Uplands, p. 437. The Yemen Highlands, p. 438. Hadramaut and South Coast, p. 439. The Oman Highlands, p. 441. The Central Ranges and Harras, p. 443. The Northern Steppes and Deserts, p. 446. The Southern Desert, p. 449. Climate of Arabia, p. 450. The Persian Gulf, p. 454. The Red Sea, p. 456. Flora of Arabia, p. 462. Fauna, p. 464. Inhabitants: the Bedouins, 467. The Wahabites, p. 471. *Topography*, p. 472.	
	STATISTICAL TABLES	486
	INDEX	497

LIST OF ILLUSTRATIONS.

MAPS PRINTED IN COLOURS.

	PAGE
1. Assyria and Chaldea	1
2. Teheran and Demavend	129
3. Asiatic Greece	290
4. Palestine—Northern Section	352
5. Palestine—Southern Section	352
6. Peninsular of Sinai	363

PLATES.

Types and Costumes—Group of Zeibeks *Frontispiece*
Baalbek—Ruins of the Two Temples *To face page* 10
Kandahar 17
View taken from the Paiwar Pass . . . 33
The Amir Sher Ali, Prince Abdallah Yan, and Durani Chiefs 56
Kelat-i-Nadir—Arghavan-Shah Gorge . . 80
Types and Costumes—Group of Hazarehs . 82
Hamadan and Mount Elvend—View taken from the South-east 91
Bridge of Dizful 95
A Baluch Mendicant 111
Fortress of Veramin 127
Hamadan, Ruined Mosque of the fourteenth century 134
Bandar-Abbas 143
Types and Costumes—Kurdish Gentlemen . 175
Town and Citadel of Van 189
The Euphrates at Birejik 202
Types and Costumes—Arabs of Bagdad . . 227
General View of Sinope 301
The Bosphorus—View taken opposite Arnaut-Koi, near the Asiatic Side *To face page* 305
Turkish Batteries at the Black Sea entrance of the Bosphorus 307
Cypresses in the Cemetery of Scutari . . 309
Brussa—General View 311
Gulf of Smyrna—General View of Kara-Tash and Gioz-Tépé 323
Smyrna—View taken from Mount Pagus . 326
Ephesus—Ruins of the Aqueduct and Citadel . 329
Isle of Rhodes—Lindos Bay 338
Mount Hermon—View taken from Rasheya . 359
Lake and City of Tiberias 372
Druze Princess and Lady of the Libanon . 379
Aleppo—General View 383
Ruins of Palmyra—The Colonnade . . . 405
Jerusalem—Omar's Mosque 417
Jaffa—General View 425
Aden—Steamer Point 439
Cisterns of Aden 476
Mecca—Court of the Kaaba 479

ILLUSTRATIONS IN TEXT.

SOUTH-WESTERN ASIA.

FIG.		PAGE
1.	Ethnical Divisions of Hither Asia	4
2.	Asiatic Origin of various cultivated Plants	6
3.	Density of the Population of Hither Asia	8
4.	Central Point of the Old World	11
5.	Centre of Gravity for the Populations of the Old World	12
6.	Religions of Hither Asia	14
7.	MARSHA PASS, NORTH OF KANDAHAR	18
8.	Itineraries of Afghanistan	19
9.	The Eastern Hindu-Kush	20
10.	The Western Hindu-Kush	23
11.	The Sefid-Koh of East Afghanistan	25
12.	THE KABUL RIVER—VIEW TAKEN NEAR CUZERGAO, SHARDEH VALLEY	27
13.	The Hamun Basin	30
14.	The Gomul Pass	39
15.	Populations of Afghanistan	41
16.	Darah Nur	44
17.	Kabul and Neighbourhood	48
18.	Kelat-i-Ghilzai	50
19.	Kandahar	51
20.	Herat	54
21.	Routes of the chief Explorers of Baluchistan	60
22.	Passes in North Baluchistan	62
23.	East Mekran Seaboard	63
24.	Inhabitants of Baluchistan	68
25.	Kalat and Neighbourhood	69
26.	GENERAL VIEW OF KALAT	70
27.	Kachi-Gandava Oasis	72
28.	Routes of the Chief Explorers of Persia since Marco Polo	78
29.	Mountains and Passes of Astrabad	83
30.	DEMAVEND — VIEWS TAKEN FROM THE NORTH-WEST	85
31.	Savalan	89
32.	Khuzistan Border Range	91
33.	Lake Urmiah	98
34.	Lakes Niris and Nargis	100
35.	Faunas of Persia	102
36.	KURDISH CAVALRY.	103
37.	Inhabitants of Persia	105
38.	PERSIAN TYPES AND COSTUMES—NOBLEMAN, DERVISH, AND MENDICANT	106
39.	NOBLE PERSIAN LADY	108
40.	Yezd and Neighbourhood	113
41.	TOWER OF MEIMANDAN ON THE ROUTE FROM DAMGHAN TO MESHED	119
42.	Meshed and Kelat-i-Nadir	121
43.	Kushan and Source of the Atrek	124
44.	Teheran	128
45.	TEHERAN—VIEW TAKEN ON THE KASONI ROUTE	129
46.	Takht-i-Sulaiman	131
47.	Hamadan and Mount Elvend	132
48.	THE RESONANT LION OF HAMADAN	133
49.	Ispahan and Environs	135
50.	ISPAHAN—BRIDGE OVER THE ZENDEH-RUD	136
51.	Shiraz and Persepolis	138
52.	VALERIAN AT THE FEET OF SAPOR—BAS-RELIEF OF THE ROYAL TOMBS AT NAKSH-I-RUSTEM, NEAR PERSEPOLIS	140
53.	Ormuz and Bandar-Abbas	143
54.	Bushir	146
55.	Kermanshah	147
56.	Shuster and Band-i-Kir	149
57.	The Dam of Ahwaz	150
58.	Range of the Plague in Kurdistan	152
59.	Routes and Telegraph-lines in Persia	157
60.	Routes of the Chief Explorers of Armenia	164
61.	Bingöl-dagh	165
62.	LAKE VAN—TADWAN BAY AND MOUNT NIMRUD	168
63.	Populations of Turkish Armenia	175
64.	Catholic and Protestant Missions amongst the Nestorians and Chaldeans	179
65.	Trebizond	181
66.	Erzerum	183
67.	Upper Murad Valley	185
68.	BAYAZID—THE MOSQUE AND THE RUINED QUARTER	186
69.	Confluence of the Two Euphrates	187
70.	Lake Van	189
71.	TOWN AND CITADEL OF VAN	190
72.	Mounds in the Tigris Valley, South of Seleucia	195
73.	The Mardin Hills	197
74.	Source of the Western Tigris	198
75.	CARAVAN ON THE BANKS OF THE EUPHRATES	203
76.	Windings of the Middle Euphrates	204
77.	The Euphrates and Lake Nejef	206
78.	Confluence of the Euphrates and Tigris	207
79.	BOATS ON THE EUPHRATES	208
80.	Canals of Mesopotamia West of Bagdad	210
81.	Mouths of the Shat-el-Arab	211
82.	DIARBEKIR—BRIDGE OVER THE TIGRIS	217
83.	Mossul and Niniveh	221
84.	Calash, and Confluence of Tigris and Great Zab	223
85.	Hakkari Kurd Tribes, Great Zab Valley	224
86.	Kerkuk	226

FIG.		PAGE
87	Bagdad	228
88.	Aintab and Birejik	231
89.	Orfa	232
90.	Orfa—Mosque and Fountain of Abraham	233
91.	The Mound of Babil	236
92.	Babylon	237
93.	Old Cities of Chaldea	239
94.	Old Provinces of Asia Minor	245
95.	The Bulgar-dagh	249
96.	Mount Argæus	251
97.	The Chimæra of Lycia	253
98.	Nisyros	256
99.	Tmolus Valley, Plain of Sardis	258
100.	Mytilene	259
101.	Delta of the Kizil-Irmak	263
102.	Lake of Sabanja	265
103.	Nicea and Ghemlik	267
104.	The Tuzla-Su Valley	268
105.	Smyrna Channel	269
106.	Falls of Pambuk-Kadeh, or Tamruk	272
107.	Plains of the Lower Meander	274
108.	Lake of Egherdir	275
109.	Mouths of the Seihun and Jihun	277
110.	Villages of various Nationalities in the Dardanelles District	285
111.	Turkish Woman of Brussa	288
112.	Inhabitants of Anatolia	293
113.	Amasia—View taken from the South-East	296
114.	Amasia	297
115.	Samsun	298
116.	Sinope	300
117.	Erekli	302
118.	Remains of the Temple of Augustus and Rome at Ancyra	303
119.	Asiatic Suburbs of Constantinople	306
120.	Street View, Scutari	307
121.	Environs of Scutari—Turkish Ladies Abroad	308
122	Ismid	309
123.	Brussa	310
124.	Tomb of Mahomet II. in the Green Mosque at Brussa	312
125.	Syzicus and Artaki Peninsular	313
126.	The Troad	314
127.	Hissarlik (Ilion)—View taken from the Mendereh	316
128.	Pergamus—Ruins of the Basilica	317
129.	Pergamus	318
130.	Phocea	320
131.	Sardes—Columns of the Temple of Cybele	321
132.	Mount Sipylus	322
133.	Smyrna	324
134.	Isthmus of Vurlah	325
135.	Strait of Chios or Chesmeh	326
136.	Chio—View taken after the Earthquake of 1881	328
137.	Ephesus	330
138.	Ephesus—Prison of St. Paul	331
139.	Strait of Tigani or Samos	332
140.	Vathy	333
141.	Miletus and Didyma	334
142.	Budrun and Kos	335
143.	Port of Rhodes	337
144.	Rhodes	338
145.	Valley of the Xanthus	339
146.	Chief Itineraries of Lycia	340
147.	Elmalu	341
148.	Albistan and Marash	342
149.	Railways opened and projected in Asia Minor	344
150.	Cyprus	346
151.	Nicosia	349
152.	Larnaka and Famagusta	350
153.	Kerynia	351
154.	Limassol and Akrotiri Peninsular	352
155.	Passes of the Amanus	355
156.	Beirut Hills	357
157.	The French Road	358
158.	Jebel Safa	360
159.	The Zerin Depression	361
160.	Peninsular of Sinai—Ain-el-Huderah	363
161.	Mount Serbal	364
162.	Mount Sinai	365
163.	Convent of Sinai	366
164.	Lake Yamuneh and Nahr-Ibrahim	368
165.	Gorge of the Nahr-el-Leitani	369
166.	Sources of the Jordan	370
167.	Lake Huleh	371
168.	Dead Sea	373
169.	Landscape in the Sinai Peninsular—View taken at Raphidim	375
170.	Inhabitants of Syria	378
171.	Homs	384
172.	The Ancient Tomb of Dana	387
173.	Antiochia and Suedieh	388
174.	Latakieh	389
175.	Ruad and Tostosa	390
176.	Kalat-el-Hosan	391
177.	Madoar Castle	392
178.	Tripoli	393
179.	Beirut	395
180.	Sidon	397
181.	Tyre	398
182.	Damascus—View taken from the Christian Quarter	401
183.	Damascus	402
184.	Jebel Hauran and Bosra	406
185.	Petra and the Arabah Depression	409
186.	Lake Tiberias	410
187.	Jericho	411
188.	Nazareth and Mount Tabor	412
189.	Akka and Kaifa	413
190.	Nablus	416
191.	Remains of the Antonia Fortress, Jerusalem	418
192.	Jerusalem	420
193	Rock of Masada	422
194.	Masada	424
195.	Jaffa	425
196.	Tor	427
197.	Itineraries of the Chief Explorers of Arabia	432
198.	The Mascat Highlands	441

FIG.		PAGE
199.	Masandam Peninsular	442
200.	SANDSTONE HILLS NEAR MESHAKEK	445
201.	VIEW OF A FULJ IN THE NORTHERN NEFUD	449
202.	Bab-el-Mandeb	457
203.	Guriah Island, Gulf of Akabah	459
204.	Coral Banks in the Central Basin of the Red Sea	461
205.	TYPES AND COSTUMES—GROUP OF ARAB WOMEN	470
206.	Derreyeh	471
207.	Koveit	473
208.	Mascat	474
209.	Aden	476
210.	Sana	477
211.	Hodeidah and Loheiyeh	478
212.	Mecca and Jeddah	479
213.	Medina	482

ASSYRIA AND CHALDEA

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THE EARTH AND ITS INHABITANTS.

SOUTH-WESTERN ASIA.

CHAPTER I.

GENERAL SURVEY.

WHETHER the first Aryan hearths were kindled on the Bactrian plains, in the valleys of the Hindu-Kush or of the Caucasus, or on the steppes of Scythia, the attention of the European student is still directed by the oldest historic records chiefly to Egypt and Western Asia. Peering back in thought through the mist of ages, we see the now luminous lands of the West wrapped still in darkness, while a dazzling light is shed over the regions east of the Mediterranean—the Nile valley, the Ionian shores and isles, the Syrian coast, the Mesopotamian plains, and Iranian plateaux. The origin of our culture remains unrevealed, but in South-Western Asia must be sought the first germs of the civilisation which has grown up from age to age, until it has become the common patrimony of the peoples of Europe and the New World. For is it not here that the Hellenic myths have placed the first Olympian seats of the gods? And is it not here also that Jewish, Christian, and Mussulman legend has planted the "tree of life," beneath whose shade the first man and the universal mother awoke? In Chaldea, amid the hills of the Indian Caucasus, in the oases of Irania, has been sought the terrestrial paradise; while the remains of the ark in which the Noachian family found refuge from the overflowing waters are still fabled to lie stranded on the Armenian Masis (Ararat), the Nizir of Kurdistan, the Persian Demavend, or some other lofty peak of Hither

Asia. Later on, the Christians spreading westwards and the Mohammedans overrunning the east, multiplied endlessly the number of mountains "witnesses of the Deluge." Such witnesses may be found in the Pyrenees, in Roussillon, and Andorra, even in Afghanistan, the Siah-Posh country, and the "Throne of Solomon," overlooking the plains of the Indus.

At the dawn of history, properly so called, the first definite events are referred to the south-western lands of Asia and to Egypt, which, east of the Nile, was regarded by the ancients, and especially by Herodotus, as belonging to the Asiatic world. Here the national groups began to be classified under the names of Sem, Cham, and Japhet; perhaps also, according to many Orientalists, under those of Sumer and Accad, a contrast which reappears later on in the opposition of Persian and Mede, of Iran and Turan. The various peoples between the Central Asiatic plateaux, the isles of the Mediterranean, and the African deserts, are numbered according to their races, usages, and industries, while on the Babylonian cylinders and prisms are inscribed ethnological and geographical documents of the highest importance. One of the oldest myths relates the dispersion of the peoples at the foot of the Tower of Babel; but despite the "confusion" of tongues, Chaldean history begins to follow the career of each nation, recording its growth, wars, and conquests.

The geographical form of Hither Asia—an expression comprising the whole of the Asia of the ancients as far as the Indus—sufficiently accounts for the prerogatives of this region as the cradle of early culture. Not only is it situated near the geometric centre of the lands forming the ancient world, but it at the same time offers the easiest highways of communication between the three continents and the great marine basins. The Nile valley is separated only by a strip of sand from those of the Syrian seaboard, while between the European and Asiatic shores there flows an arm of the sea narrower than many a river. From the Indian Ocean to the Mediterranean, Hither Asia presents two natural routes—the Isthmus of Suez and the Mesopotamian plain, which is by far the more important in the history of civilisation, and which communicates through several openings with the Syrian seaports. The roads leading also from the Upper Euphrates down to the Euxine may be said to connect the Indian Ocean at once with the Mediterranean and with the lands facing the North Atlantic inlets, for the main axis of the highlands forming the European water-parting between the Alps and Balkans terminates on the Black Sea coast, while the Bessarabian lowlands east of the Carpathians lead, by easy transitions, to the northern slopes of the continent.

A large portion of Hither Asia consists of elevated tablelands, some standing even at a height of over 6,000 feet. But the seaboard is everywhere indented by deep gulfs and marine inlets. The Indian Ocean penetrates far inland between Mekran and Oman, forming beyond the Strait of Ormuz the inland sea known as the Persian Gulf. On the opposite side of Arabia the Red Sea fills a surprisingly regular depression in the crust of the earth, terminating on either side of the Sinai peninsula in secondary basins, also noted for their remarkable symmetry.

The Mediterranean, flowing by Cyprus, describes a series of bays along the south coast of Asia Minor, and by a thousand channels and ramifications carves the east side of the Ægean into a second Greece, with its countless islands, peninsulas, and headlands. Another basin, which may be described rather as a vast lake—the Sea of Marmora, or Propontis of the ancients—connects the Archipelago with the Euxine, which flows eastwards to the foot of the Caucasus and Armenian highlands. Lastly, the circle of marine waters round the West Asiatic seaboard is completed by the closed basin of the Caspian. Account must also be taken of lakes Urmiah, Van, and others, often large enough to present the aspect of oceanic gulfs. Here and there old marine inlets have been replaced by extensive plains, the most remarkable of which is the vast Mesopotamian valley, forming a continuation of the Persian Gulf towards Alexandretta Bay, and dividing the whole of Mohammedan Asia into two distinct halves—Arabia, with the coast ranges of Syria and Palestine on the south, the highlands of Asia Minor and the Iranian plateaux on the north and east.

Thanks to this disposition of the surrounding waters and inland plains, Hither Asia, centre of the Old World, is, at the same time, almost a peninsular region, and thus easily became, during the course of history, a common point of union for peoples of diverse origin and usages. Nowhere else have the rival races of the globe had more civilised representatives, sharply contrasting one with the other, than in this region. The North Asiatic hordes, now confused together under the collective name of Uralo-Altaic races, had penetrated into the uplands far south of the Oxus, assumed limit of Iran and Turan, and the struggle between these two ethnical elements has here been continued throughout historic times. It is even still maintained between the Persian and Turkoman, while the Mongol invasions are recalled by the presence of many populations, notably the Hazarehs and Aimaks, south of the Hindu-Kush. Other ethnical elements belonging, if not to the black race, at least to that of the Kushites, a Negroid stock allied to the Ethiopian, were also diversely represented in these regions. Some trace of their presence on the plateaux of Susiana may be detected in the processions of captives figured on the bas-reliefs of Nineveh. Nimrod, the "mighty hunter before the Lord," is the legendary ancestor of these mythical peoples.

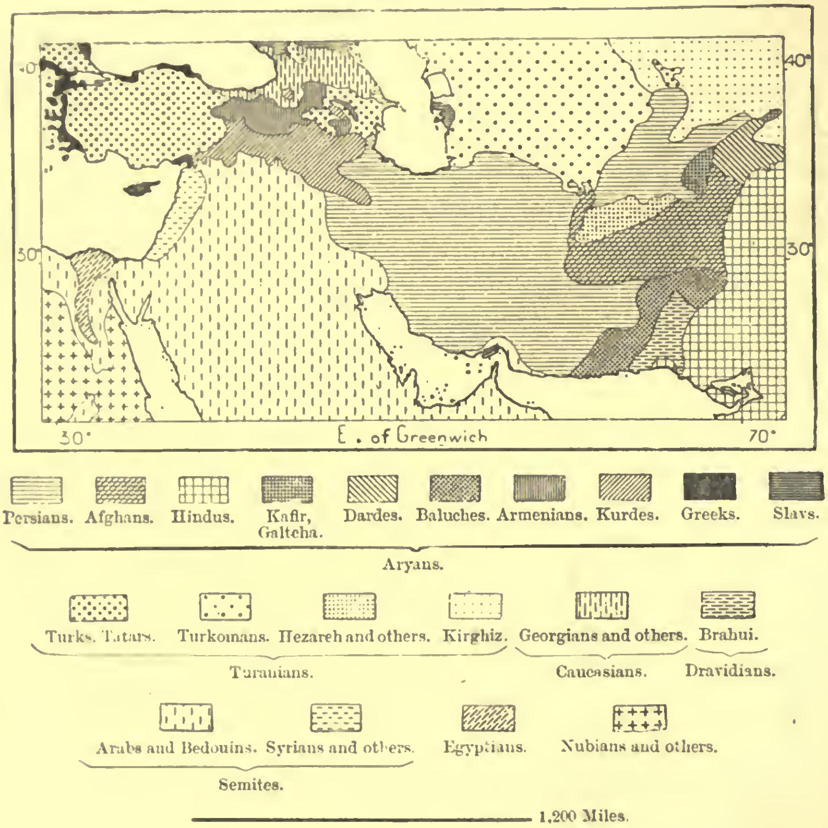
The facility of communication between the two shores of the Red Sea had also at all times brought about a mingling of the Arab and African races. Nevertheless, the Negro element proper appears never to have had any relative importance in the history of the West Asiatic peoples. The preponderating influence, enjoyed at first by the "Turanians" and Kushites, passed eventually to the Semites in the south and to the Aryans in the north. The whole of Arabia, as far as the Euphrates, is the domain of the former, while the latter prevail numerically on the Iranian plateaux, the Armenain highlands, and certain parts of Asia Minor.

In the general historic movement Hither Asia preceded Europe; but it was precisely in this direction that civilisation progressed. The commercial and intellectual axis of the Old World followed the direction from south-east to north-west. Hence the zone of greatest vitality in the history of nations stretches from

India and Mesopotamia through Ionia, the Mediterranean peninsula, and France, to the British Isles. Before Europe formed part of the civilised world, commercial intercourse naturally found its chief centre in the regions of the Asiatic seaboard. The legend of the Argonauts and the Golden Fleece commemorates the relations formerly established between the Caucasian highlanders and the Hellenic seafaring populations. But history speaks more clearly of the great marts that flourished on the shores of Syria, and of the services rendered to civilisation by the Phœnicians, not only by exploring the coast of West Europe and conducting caravans across

Fig. 1.—Ethnical Divisions of Hither Asia.

Scale 1 : 45,000,000.



the natural lines of communication between the Indian Ocean and Mediterranean, but still more by spreading abroad a knowledge of the phonetic alphabet derived from the Egyptian hieroglyphics. Continually meeting with strangers speaking a thousand different tongues, the Phœnicians must have been struck especially by the great diversity of sounds which could be reproduced only by employing the signs used by the Egyptians to express ideas as well as the sounds of the corresponding words. Separating the most available symbols from the ideographic sense, the Phœnicians applied them exclusively to the reproduction of sound, thus emancipating the mind from the primitive symbolism, and imparting to written

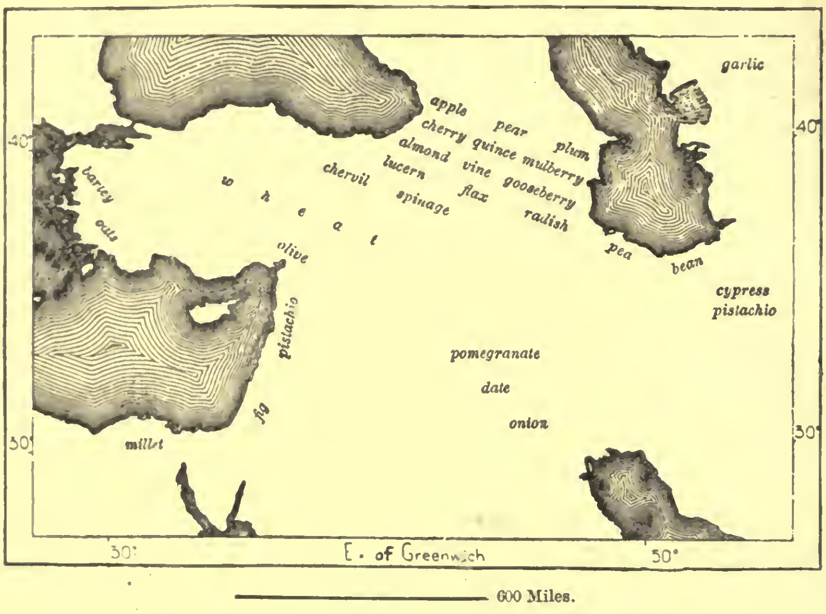
characters a purely phonetic value. Their geographical discoveries, their distant voyages round Europe and Africa, their inland travels up the great rivers and across portages, their traffic in metals, woven goods, pottery, manufactured wares of all sorts since discovered by archæologists in so many lands, prepared the tribes of the western forests for a higher culture by developing trade and mutual intercourse among them. To the Phœnicians especially are we indebted for the work of prehistoric transition, without which the European world could never have entered on its historic career. To the civilised peoples of the future they bequeathed, in the alphabetical system of writing, the true germs of progress from a chaos of hostile elements to a common humanity, and their work in this respect is justly symbolised by the travels of the Tyrian Hercules, conqueror of the world.

Five or six centuries after the Phœnicians, the Hellenes dwelling on the coast of Asia Minor also took a large share in the discovery of the western regions. Their colonies were scattered along the Mediterranean shores as far as the Atlantic seaboard. As traders they introduced methods of exchange unknown even to the Phœnicians; they developed a true coinage, whereas the dealers of Tyre and Sidon were still confined to a cumbrous system of barter. But how many other discoveries of a higher order than those associated with commercial pursuits are due to those Asiatic Greeks, precursors of Europeans in nearly all branches of human knowledge? Miletus, metropolis of so many colonies, was, twenty-five centuries ago, the chief centre of geographical studies. Here Thales taught the first principles of the subject, and here the earliest-known charts were planned by Anaximander, Hecatæus, and Aristagoras. The neighbouring town of Halicarnassus gave birth to Herodotus, "father of history and geography," the first comparative ethnographist, a charming writer, artless in his style, but always a shrewd observer, just and accurate in his conclusions, impartial enough to love the "barbarians" themselves while still assigning the first place to the Greeks, and especially to the Athenians. And how many other scarcely less illustrious names are the proud boast of that glorious land towards which we turn to hail the dawn of our intellectual life, and whence comes the distant echo of those Homeric songs irradiating the first essays of our forefathers on the path of human progress?

The name of Asia, or Asiadis, seems to have been originally restricted to a simple province of Lydia, and afterwards gradually extended, first to the whole of the Anatolian peninsula, and then to all the continent, advancing, so to say, in the footsteps of the early explorers. Slowly it dawned on the Greeks how small was their Hellenic world east of the Ægean compared with the great Asiatic mainland. Nevertheless the expression Asia Minor sums up accurately enough the historic part played by the peninsula projecting between the Euxine and Cyprian waters; for those nations that failed to cross the Caucasus in their westward march were thrown together at this extremity of the continent in a space confined on three sides by the sea. Pressing one on the other, nations and tribes of diverse origin were unable always to preserve their distinctive traits, and many became so mingled together that it is no longer possible to recognise with certainty their ethnical elements. But in the vast laboratory of humanity nothing is ever lost

utterly, and the genius of the various constituent races is still reflected in the history of Asia Minor and in its influence on European culture. The northern tribes, commonly grouped under the general name of "Turanians," and often regarded as inferior to those classed as "Aryans," do not appear to have played a less important part in the common work of progress than their neighbours. From them was acquired a knowledge of iron and the other metals,* and to them also we are doubtless indebted for most of our domestic animals. At any rate, in the lands occupied at the dawn of history by the Turanians, zoologists now seek the centre of dispersion of those animals which have become the chief companions of man. In the valleys of the Tigris and Euphrates, at the foot of Ararat, on the slopes of the Caucasus, or on the Iranian plateaux, were grouped together the wild precursors of

Fig. 2.—Asiatic Origin of various cultivated Plants.
Scale 1 : 28.000,000.



the domestic dog, of the ox, goat, sheep, pig, perhaps also of the camel. Of the two primitive equine species one is supposed to have represented the "Aryan," the other the "Turanian" horse.

From Hither Asia also probably came most of the more useful cultivated plants, such as the olive, the plum, almond, vine, and perhaps the peach; flax, lucern, bean, pea, and above all wheat, barley, and oats.† If such be the case, may not the old legend be right in placing the cradle of civilised man in the same region? For what can the condition of the human animal have been before he knew how to cultivate the nourishing cereal symbolised by the Greeks under the form of the goddess-daughter of Demeter, now black and of awful mien, reigning over the

* Rawlinson, "The Five Great Monarchies"; Maspero, "Histoire Ancienne des Peuples de l'Orient."
† Alphonse de Candolle, "Géographie Botanique Raisonnée."

shades of the dead, now fair and radiant, crowned with bluebells by the sparkling stream?

The northern races also took a noteworthy share in the moral development of the peoples occupying the vast Anatolian quadrilateral. Their genius is revealed in the religions of the East, especially in the practice of magic analogous to the Shamanistic rites of the Samoyedes and Tunguses. From them came also those divinities which, as belonging to inferior peoples, were by the Greeks banished to the lower regions. Such were the hundred-armed monsters, the deformed beings who tear up the ores from the bowels of the earth and forge the metals in its echoing caverns swayed by Vulcan, the lame god, butt of Olympian wit and laughter. Like the Chaldeans, whose venerable astronomic system survives in the signs of the zodiac and in our duodecimal divisions and week of seven days, the Semitic or Semitised peoples of Asia Minor took also a twofold part in the development of nations, influencing them both by their commercial intercourse and religious ideas. In the Hellenic world the social groups assumed above all a civic character, whereas in Phrygia and the neighbouring states they formed so many "congregations," in which the priest held sway in the name of the gods, and in which the temple always occupied the centre of the city. Those subtle eastern cults, which were associated especially with the worship of death, identified with life by the resurrection ever springing from the sacrifice, were even threatening to prevail over the joyous rites of Greece, when Christianity, traditionally attributed to a Semitic source, but already penetrated by Iranian elements and anticipated by the Alexandrian neo-Platonic philosophy, spread rapidly over the western world. In this religious revolution, which laid the temples of the gods in ruins, it was, perhaps, Asia Minor that took the largest share. It was Paul, a Cilician Jew, but already a Greek in temperament, that became the most zealous apostle of the new doctrine, preaching it no longer to the narrow circle of the children of Israel, but to the vast multitude of the Gentiles. From the earliest time of his propaganda the "Seven Churches of Asia" were the chief centres of proselytism, and when the now established religion of Christ formulated its dogma in precise terms, it was in the Anatolian city of Nicæa that were proclaimed the articles of faith still repeated in every Christian community. Then came, some centuries later on, the monotheism of the Arabian prophet, and it was in the Anatolian peninsula that were fought the great battles which sealed the triumph of the Crescent over the Cross in the Euxine basin.

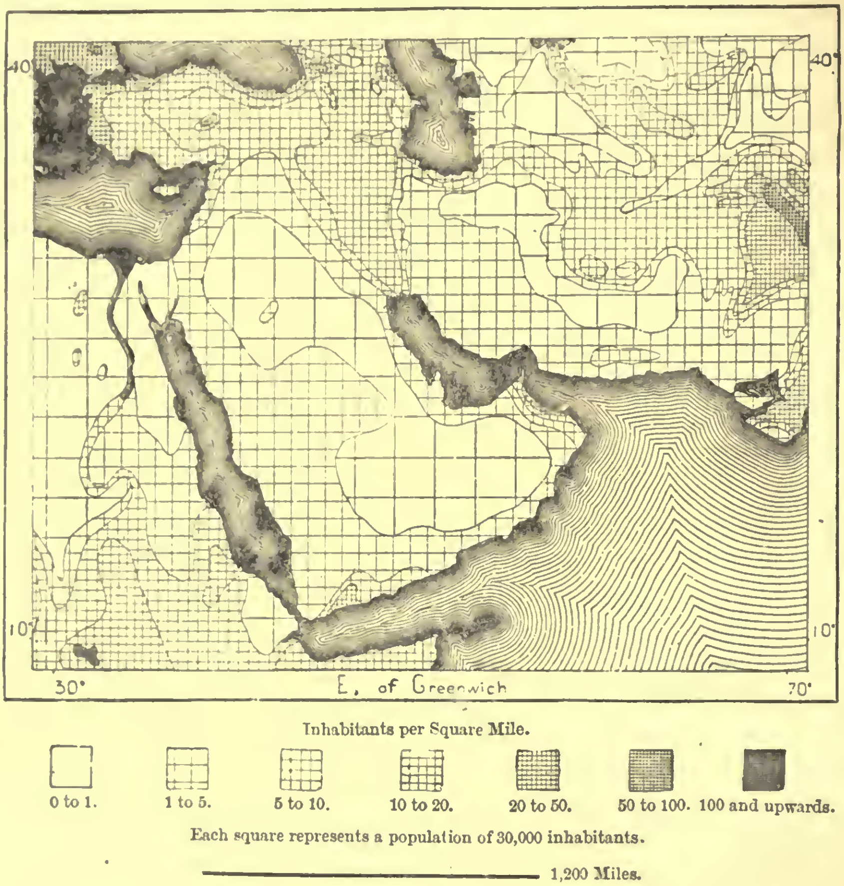
And the lands which were the scene of all these great events have again lapsed into the silence of death. These regions, legendary cradle of mankind and historic source of our culture; this hallowed spot, where, towards the dawn of history, the poet reveals to us men and gods doing battle under the walls of Ilium; these renowned cities, Babylon and Nineveh, Ecbatana and Susa, Baalbek and Palmyra, Antiochia and Damascus, which shine with such effulgence in the past, what are they now compared with the western lands formerly held by a few painted barbarians, now crowded with vast multitudes, conquerors of the ancient solitudes? Within a brief three thousand years what an amazing contrast! Then the

Euphrates valley, succeeding to that of the Nile, formed the centre of the western world, while Europe was the region of Cimmerian darkness, an unknown wilderness. Now the focus of light has moved westwards, and the East has become wrapped in gloom.

In the number of its inhabitants, known only approximately, Hither Asia has fallen quite as low as in the relative importance of its culture. The region stretching from the coast of Makran to the Ægean Sea has a superficial area equal

Fig. 3.—Density of the Population of Hither Asia

Scale 1 : 45,000,000.



to about three-fourths of the European continent; but its population is probably ten times smaller, and, so far from increasing, seems to be actually diminishing. What are the causes of this decadence, which inspires so many eloquent pages to the historian and moralist? Are they to be sought exclusively in the intestine wars and foreign invasions by which these lands have been so frequently wasted? But since the time of Attila, how many exterminators have overrun Europe in all directions! It must, however, be confessed that in Western Asia the area of cultivation was relatively less extensive, and far more exposed to

inroads than the European countries bordering on the Mediterranean and Atlantic. Between Persia and Asia Minor the habitable zone formed merely a narrow isthmus, like that connecting Egypt and Syria. Torn by incessant internal strife, the peoples of Iran, Mesopotamia, Syria, and Asia Minor were also exposed to the attacks of their southern and northern neighbours, the Arabs on the one hand, the Uralo-Altaic nomads on the other. These enemies, being protected by the wilderness, were unconquerable, and always ready to seize the favourable opportunity in order to fall upon the settled districts, massacre the inhabitants, or carry them off into slavery. Several times during the historic period the spontaneous cultures of Western Asia were in this way mown down like the grass of the fields, and by none more frequently than by the ancestors of the Turk, who now rules over all the land west of Iran. And how few of these peoples have found within themselves sufficient elements of regeneration to recover their national independence! The masses have remained in a state of shameful thraldom, consumed by vice as by a moral leprosy.

To explain the disappearance of the populations, an argument has also been drawn from the assumed exhaustion of the soil, which formerly yielded abundant crops of cereals. The lands on the plateaux and slopes which are not exposed to periodical floodings, like the plains watered by the Tigris and Euphrates, are certainly, in course of time, deprived of their chemical elements, and thus gradually become unproductive. The very works that were formerly most beneficial are now often injurious. Ruined buildings redden the soil with the dust of their crumbling brick walls, and the choked-up canals spread their sluggish waters over the plains. The arable lands are thus on the one hand invaded by the desert, while on the other fever and death are propagated by the ever-increasing marshy tracts.

But whatever weight be assigned to these causes of decay, another must be sought in the gradual drying up of the land. Although everywhere surrounded by marine waters, the climate of Hither Asia is as thoroughly continental as the heart of the continent. Before meeting on the Iranian plateaux and Babylonian plains, the prevailing northern and southern winds have been deprived of all their moisture in their passage across thousands of miles of arid land. Hence the equatorial and north-east polar currents, which meet in Western Asia, are amongst the driest on the globe. Their track across Asia and Africa is indicated by the great desert zones of the Gobi and Sahara, while Persia, and especially Arabia, have their own sandy or stony wastes. These regions would be altogether uninhabitable but for the slight quantity of moisture, partly, however, arrested by the coast ranges, which is borne inland by the monsoons attracted from the sea by the rarefied atmosphere of the heated soil. Such is the dearth of running waters that in the whole of Arabia there is not a single perennial stream; while from Karachi to Teheran, a distance of nearly a thousand miles in a straight line, the traveller meets with no river more than two feet deep. The rainfall is insufficient to support a rich spontaneous vegetation anywhere except along the southern shores of the Caspian and Euxine, where the northern winds traverse two marine basins before reaching the coast, and here and there on the Mediterranean, where the rain-

bearing clouds are deflected towards the seaboard. The whole of Hither Asia, fifteen times larger than France, probably sends seawards a liquid mass but slightly greater than that of the French rivers.

Although always less favoured in this respect than Western Europe, there are many indications that in former times Hither Asia was more abundantly watered than at present. The descriptions of the old writers do not, on the whole, convey an idea of such a lack of flowing waters as now exists. Even the nomads, dwelling in the midst of rocks and sands on the skirt of the desert, could scarcely now regard Canaan as "a land flowing with milk and honey." Many formerly fertile regions also have lost their forests, their arable lands, even their grassy tracts and brushwood. How could the great marts of the Ionian seaboard have acquired such importance if, behind the narrow zone of the coast region, there was not found a reserve of vital force in the plateaux sufficiently watered to support a much larger population than is now possible? And the cities of the wilderness—Palmyra and Baalbek, wealthy enough to build sumptuous temples, whose ruins still excite the wonder of the traveller—could scarcely have attained such splendour had they not been surrounded by more extensive oases, sufficient to supply abundant provisions to their inhabitants and the multitude of strangers visiting them. Modern exploration has revealed in Asiatic Turkey, Persia, and Baluchistan vast spaces, formerly thickly peopled, which have been changed to deserts. Cities have been partly swallowed up in the encroaching sands; navigable rivers have been reduced to shallow streams, inaccessible to the smallest craft; the site of ancient lakes is often indicated only by swamps or saline efflorescences.

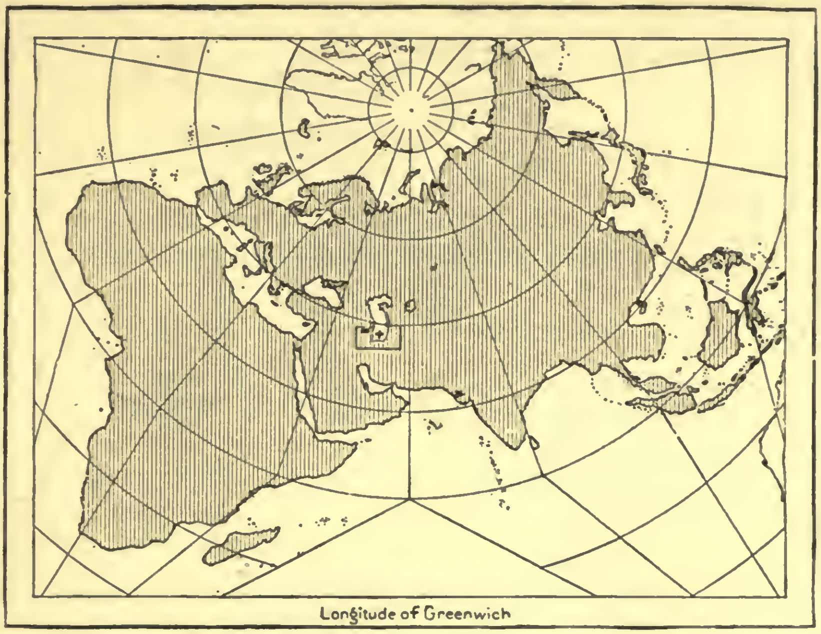
But notwithstanding the desiccation of the land, Hither Asia cannot fail to recover much of its former importance. The position to which it owed its preponderating share in the work of civilisation lost its value when the great highways of trade were deflected westwards. But the direct lines are resuming all their importance in international relations, and the main overland route from Europe to India is tending more and more in the direction of the Euphrates valley and the Iranian plateaux. Thus Western Asia again claims the advantages of its position as the geographic centre of the Old World. The exact centre of the irregular figure formed by the three continents of Europe, Asia, and Africa is not far removed from the plains where stood the famous cities of Persia and Assyria. It lies at the south-west angle of the Caspian, so that the tower of Babel really stands where the legend placed it, on the confines of three worlds. Eastwards Asia stretches away to the ocean where "the sun rises;" on the south the parched Arabian peninsula announces the neighbourhood of Africa; while on the north-west Anatolia lies at the threshold of Europe. Through the Suez Canal, separating it from Africa, Hither Asia has again become for maritime trade the centre of gravity of the continental group; through the junction of the future railway systems it will also, sooner or later, become the central emporium of the Old World. According to the approximate estimates of the number of inhabitants of the eastern hemisphere, the centre of population would at present coincide with the south-western region of the Tibetan plateau—that is, with an almost unin-

BAALBEK—RUINS OF THE TWO TEMPLES.

habited land. But the rapid increase of Europeans is deflecting the point of equilibrium more and more to the west, towards the passes of the Hindu-Kush, which are historically so important as highways of communication between the two halves of the Aryan world.

Doubtless the assimilation of Hither Asia to the West in respect of its trade, industries, and general culture must prove a work of time and great difficulty. Nor can the material civilisation introduced from Europe fail to be affected by the genius of the East, in appearance so pliant, in reality so tenacious. The Asiatic will never slavishly accept the lessons of the foreigner. He modifies all he touches, and, to their cost, the Greeks and Romans already discovered what it meant to live

Fig. 4.—Central Point of the Old World.
Scale 1 : 200,000,000.



Central Point without the islands. Central Point with the islands.

3.600 Miles.

in the midst of those Oriental populations. Instead of playing the part of civilisers, they were themselves subdued by the manners and religions of the lands where they dwelt, and were fain to propagate them in the West. But at present, however original be their national characteristics, the Asiatic Greeks, the Armenians, and Syrians are being more and more attracted by the contemporary scientific movement. And what neglected resources, what undeveloped treasures, do not these peoples still possess! The reaction of civilising influences towards the East, which has already assimilated Hungary, the Danubian Principalities, Greece, and Russia, and which has already renewed the aspect of many Syrian or Greek cities in Western Asia itself, must necessarily spread towards the Euphrates and Iranian tableland.

Once before, during the Crusades, the conquest of the East was attempted by the European nations. For nearly two hundred years—from the end of the tenth to the end of the twelfth century—an almost incessant movement of warlike migrations was directed from Europe against Asia. On the battle-field fell hundreds of thousands, attracted more by a love of conquest and plunder than by proselytising zeal. Millions of warriors, of captives, or retainers perished in the camp or on the march; yet after two centuries of massacres and pestilence the Crusaders had to abandon the East without retaining a single citadel on the mainland. Nevertheless, their efforts had the result of delaying the fall of the Byzantine Empire, by carrying far beyond the Bosphorus the scene of the struggle

Fig. 5.—Centre of Gravity for the Populations of the Old World.
Scale 1 : 200,000,000.

between the two rival religions. The commercial populations of the Mediterranean, whether Christian or Moslem, were also brought into closer contact, while the Italian traders became familiar with all the highways of Hither Asia, gradually acquiring more wealth by peaceful means than the Crusaders had obtained by the sword. Certainly the political ascendency of Europe could not have failed to increase rapidly in the East even, despite the fall of Constantinople, had not the circumnavigation of Africa, and especially the discovery of the New World, attracted the spirit of enterprise to other fields, and transferred to the Iberian peninsula the commercial pre-eminence hitherto enjoyed by Italy. The discoveries of Columbus obliged Europe, so to say, to turn to the rightabout, thus

giving to the Eastern peoples a respite of three hundred years in the hereditary struggle which may be said to have begun in mythical times by the Argonautic expedition and the Trojan war.

At present the pressure of the West is felt more strongly than ever, although the religious fervour of the days of the Crusaders has been nearly eliminated from the "Eastern Question." If the Western nations cared now to recover Jerusalem, the only difficulty would be, not the conquest, but the appointment of guardians from amongst the rival Protestant, Catholic, or Greek claimants to the possession of the Holy Sepulchre. The partition of the Mohammedan world has, in fact, already begun, not only in European Turkey, but throughout the whole of Western Asia. Not satisfied with the occupation of the Trans-Caucasian valleys of the Kur and Rion, Russia has seized the most formidable strongholds in the Armenian highlands, and now holds the passes enabling her to hurl her armies at pleasure on Constantinople, Aleppo, or Bagdad. Beyond the Caspian they have also occupied more than one position whence they might easily assail the vital strategic points of Persia; while the conquest of the Turkoman oases places them at the very entrance of the highway to India through the Heri-rud valley.

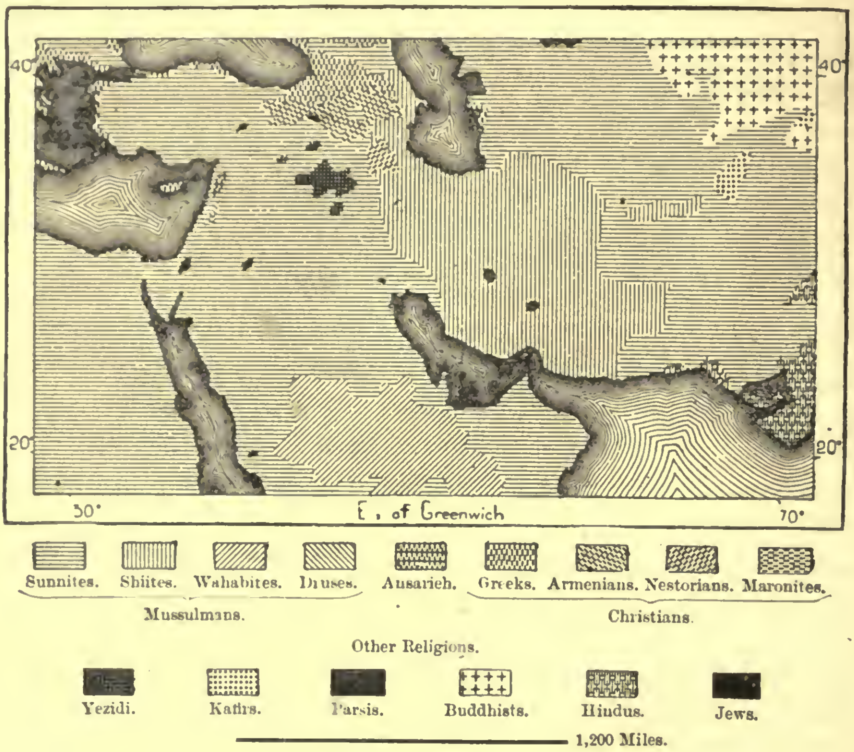
Their English rivals for the political hegemony of Asia have on their part strengthened their outposts by the occupation of Cyprus, which commands at once the Anatolian and Syrian seaboards, close to the great bend of the Euphrates and to the regions directly threatened by the Russians in Armenia. At the entrance of the Red Sea, on the main route of steam navigation, they also hold the citadel of Aden, while a few subventions distributed among the tribal chiefs render them predominant over all the populations along the seaboard. In many inland cities of Persia, Anatolia, and Irak Arabi, the British consuls are moreover far more the masters than the provincial governors themselves. Amongst the Maronites and Druses of the Syrian ranges the suzerainty of France has been often admitted, often disputed, according to the oscillation of political rivalries. Jerusalem itself has been placed, through the embassies, under the joint control of all the European powers, each enjoying in its turn a preponderating voice according to the influences prevailing for the moment in the Golden Horn.

The two religions that took their rise in Palestine are now represented in Hither Asia only by a few relatively unimportant communities. The Jews are nowhere numerous except in Jerusalem and some of the surrounding towns, while the Christian congregations flourish chiefly in the shadow of the Holy Sepulchre and some other venerated spots. Elsewhere they are almost exclusively confined to the Lebanon, and to the Hellenic and Armenian districts of Asia Minor. Most of the inhabitants of Asiatic Turkey, and nearly the whole of the population in the other regions of Hither Asia, are followers of the Prophet. Arabia, where stand the holy cities of Islam, and whence the faith was propagated over the rest of the world, is still the true centre of Mohammedanism, and here dwell its zealous apostles. But notwithstanding their religious fervour, a uniform creed has failed to give political cohesion to this section of the continent. The Pan-Islamitic coalition, of which so much has recently been heard, can never be a

source of anxiety to the European powers contending for supremacy in the East. The zealous Wahabite sect, which professes scrupulous observance of the Prophet's teaching, is numerous only in the interior of Arabia, where it is shut off from all contact with the outer world. On the other hand, most of Mohammedan Asia is divided between the Turkish Sunnites and Persian Shiahs, who mutually detest each other, and who often regard the Giaour himself as less impure than a member of the rival sect. In many places religious indifference is universal, and most of the Bedouins have never known any god except their lance, with which they fall at times even on the pilgrims returning from Mecca. Amongst the

Fig. 6.—Religions of Hither Asia.

Scale 1 : 45,000,000.



majority of the Turks themselves the faith has lost its active force, degenerating into a dreary fatalism, forerunner of death. If conversions to Christianity are all but unknown, this resistance must be attributed not to their religious convictions so much as to long political rivalry, to traditional hatred, and to the thousand contrasts presented by different social usages and habits of thought.

But apart from this lack of political and moral cohesion, the geographical condition of the land itself must always prevent its inhabitants from combining successfully against the European powers. By vast deserts and waterless wastes these Asiatic regions are divided into distinct sections, without any means of intercommunication except by the high seas, which are controlled by the fleets of

the West. Even by its two chief rivers, the Euphrates and Tigris, Western Asia is, so to say, divided from the strategic standpoint into two parts, connected only by a narrow mountainous isthmus between the head of the fluvial navigation and Russian Caucasia. Politically, Pan-Islamism is far less formidable in the land of its birth than in India, where fifty million Mohammedans are united by a common worship and a common patriotic sentiment, or even in Africa, where unknown multitudes are massed geographically together, and still animated by the fiery spirit of proselytism.

CHAPTER II.

AFGHANISTAN.

KAFIRISTAN, KABUL, HERAT, KANDAHAR.

THROUGH the East Afghan uplands, limited northwards by the snowy Hindu-Kush or Indian Caucasus, Hither Asia reaches the Great Pamir, or "roof of the world," which forms the orographic centre of the continent, and the converging-point of the Anglo-Indian, Chinese, and Russian Empires. Here the plateau, above which rise some of the highest peaks on the globe, exceeds in altitude the loftiest Pyrenean crests; yet a little farther west lie the passes that have at all times been the most frequented between the Turkestan depression and the Indus valley. Hence the extreme military importance of Afghanistan, and the still greater part it has played in the history of trade and migrations.

Although the early migratory movements of the Aryans across the mountains are mentioned neither in tradition nor in legend, nevertheless the close resemblance, amounting almost to identity, in the religious rites and ceremonies, in the languages and civilisations, of the peoples dwelling on the banks of the "seven rivers" of Irania and the "seven rivers" of India, leave no doubt that the passes between the two regions were well known and frequented from the remotest times. The expeditions of Alexander, followed by the establishment of the Græco-Bactrian states, stretching probably into the heart of India, again connected the two extremities of the Aryan world through these defiles of the Hindu-Kush. Later on the same passes were chosen by the Buddhist missionaries to bring India into relation with the regions of North Asia and the far East. The colossal images carved ages ago on the rocks at Bamian have been witnesses of many a warlike, religious, or commercial expedition by which the course of human events has been largely influenced. The same highways have been traversed by Mongols, Turks, and Persians; and now Russians and English, encamped on the Oxus or behind the fortified lines of Peshawar, await, in the popular belief, the signal to renew the secular struggle for empire.

At this point the plateau separating the Indus valley from the Turkestan slopes scarcely exceeds 180 miles. Kabul, already thrice seized by the British,

KANDAHAR.

stands within some sixty miles from the highest pass leading to what may now be called the Russian slope. English guns and Muscovite envoys have already crossed this very pass of Bamian. Towards the north-west of Afghanistan the mountain barrier disappears altogether between Merv and Herat, where no serious obstacle stands in the way of military expeditions. In a few days a gang of European "navvies" might now complete the carriage route leading from the Caspian to Kandahar.*

Afghanistan may altogether be regarded as a land of transition. It is the Roh or highland region mentioned by the old writers as comprised between Iran, Turan, and Hind. Forming the eastern continuation of the Iranian plateau, it separates one from the other the two centres of civilisation in the Indus and Euphrates valleys, and its chief importance is consequently due to the routes traversing it between these two regions. Its cities, standing either in fertile valleys, in the midst of oases, or at the entrance of mountain gorges, are mentioned in history mainly on account of their strategic value, and of the advantages they afford to armies marching to the conquest or defence of distant territories. Hence the expression "key of India," so often applied to Herat, to Kandahar, Ghazni, or Kabul. "Since the remotest times," wrote Akbar's historiographer, Abu 'l Fazel, in 1602, "Kabul and Kandahar are regarded as the gates of Hindustan; one opens the road from Iran, the other from Turan, and if these points be well guarded, the vast empire of India is sheltered from foreign invasion."

Yet, notwithstanding the military expeditions that have so frequently traversed the land, and despite the labours of numerous explorers, such as the two Conollys, Lord, Forbes, Burnes, and others, Afghanistan cannot yet be called a well-known region. Several routes carefully laid down by Government surveys have long remained sealed documents, while the valuable charts accompanying them have become mildewed in the portfolios of the India Office. The districts lying at a distance from the strategic routes have remained unexplored, and most of the travellers who have recently penetrated into the country have followed in the wake of the military expeditions. The direct route from Kabul, through the Hezareh territory to Herat, has not yet been traversed by any European. MacGregor, who last attempted to penetrate in this direction from Persia, was disowned by the pusillanimous British authorities, and compelled by the Amir to retrace his steps. At the same time the isolated masses and ridges everywhere intersecting the base of the plateau transform many districts into a labyrinth of mountain gorges and valleys, rendered still more inaccessible by their savage denizens. Apart from the various routes between Kabul, Kandahar, and certain regions bordering on India, the surface of the country is only roughly sketched on our maps from the itineraries of European explorers, and the points astronomically determined by them, chiefly towards the Persian and Indian frontiers.

Nor are there any accurate returns of the population, the only census ever taken having been made by Nadir Shah for the purpose of determining the taxation and military conscription. On the basis of this rough calculation, the various

* Lessar, Rawlinson, Marvin, "The Russians at Merv and Herat."

tribes are still estimated at so many hundred or so many thousand families,

Fig. 7.—Marsha Pass, North of Kandahar.

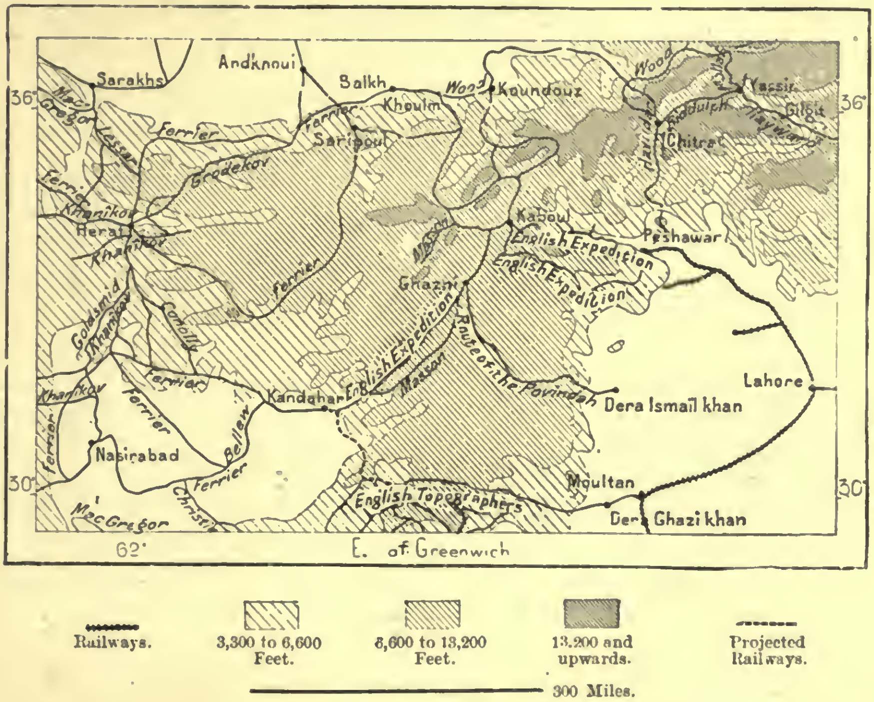
notwithstanding all the wars, crossings, and migrations that have taken place

during the last hundred and fifty years. Present estimates range from three to five millions and upwards for Afghanistan proper.

Afghan Highlands.

Disregarding the irregularities of its political frontier, Afghanistan may be described as a plane inclining to the south-west from the north-east corner of Kafiristan to the marshy depression into which are discharged the waters of the Hilmend. The upper borders of the plateau are enclosed by two lofty barriers; on the north the Hindu-Kush, with its western continuation, sometimes designated by the classic name of the Parapomisus; on the east the Sulaiman-dagh, with a number of secondary chains. Within these two frontier ranges the ridges and

Fig. 8.—Itineraries of Afghanistan.
Scale 1 : 13,000,000.



intermediate river valleys intersecting the plateau run in various directions, but mainly follow the general tilt of the land from north-east to south-west.

Of all the Afghan ranges, the loftiest and most regular is the Hindu-Koh, or, "Mountain of the Hindus," better known as the Hindu-Kush, or "Hindu killer," probably in allusion to the mortality of the traders who risk their lives amidst its snows in order to retail their wares to the Tajiks and Uzbegs of Turkestan. To the same range modern writers have applied the expression "Indian Caucasus," whereas by the Greeks it was called the "Caucasus" simply, regarding it as a continuation of the Ponto-Caspian ranges.

Although forming a south-western continuation of the Karakorum range, the Hindu-Kush is separated from that system by a profound gap to the north of the Upper Yasin valley. The gorge traversed by the Mastuj, a tributary of the Chitral, leads by easy stages across the pastures to the broad, grassy Baroghil Pass, where the inhabitants of the upper Oxus graze their cattle. According to the "Mollah," or native explorer, who crossed this part of the parting-line in 1874, this pass is only 12,000 feet high; and Biddulph tells us that at this point the great divide between the Indus and Oxus basins might easily be crossed in a wheeled waggon. The highest summits occur farther south in a chain which runs from the western extremity of the Karakorum in a south-west direction between the Mastuj

Fig. 9.—The Eastern Hindu-Kush.

Scale 1 : 1,250,000.

60 Miles.

and the rivers flowing to the Gilgit and the Indus. This lateral ridge, sometimes known as the "Lahori Mountains," from a central pass of that name, rises at certain points to elevations of 19,200, 19,700, and even 22,800 feet.

Towards the west and south-west the Hindu-Kush gradually increases in elevation, attaining an altitude of over 25,000 feet in the Tirich-mir, a rival of the Karakorum giants. But even here the range is crossed by the practicable Nuksan Pass at a height of 16,000 feet; and farther west by two others, the Khartaza and Dora, of which the latter appears to be the easiest, with an estimated altitude of 16,000 feet. Beyond these peaks the water-parting between the streams flowing south through Kafiristan and north to the Badakshan and Kunduz, has not yet been visited by Europeans. But we know that the Kafirs of the southern slopes drive

their herds to the northern pastures, so that here also the main range presents no impassable barriers. West of the Anjuman Pass, the better-known section, which describes a crescent about 120 miles long, with its converse side facing north-westwards, is broken by some twenty gaps varying in height from 11,000 to 15,000 feet, and sometimes accessible even to caravans of camels. Amongst those mentioned in history are the Kawak, immediately west of Anjuman, probably used by Alexander, and crossed by the pilgrim H'wen-tsang on his return to China, as well as by the English travellers, Wood and Lord, on their return to India; the Thal, crossed by Tamerlane; the Shibr, east of Bamian, the most frequently mentioned in Sultan Baber's memoirs; the Kuchan, about the middle of the crescent, probably the most frequented at present. The peak which rises above this pass to an absolute height of nearly 20,000 feet, and which is more specially known as the Hindu-Koh or Hindu-Kush, is visible both from Kunduz on the north and from Kabul on the south. Nowhere else does the chain present a more imposing aspect, being here completely encircled on the north by the valleys of the Surgh-ab and Inder-ab, whose junction forms the Kunduz or Ak-Serai, and on the south by those of the Ghorband and Panjir, both of which flow to the Kabul River. The northern slope presents an almost perfectly regular outline, forming an inclined rampart, black at the base, white at the summit, streaked by the horizontal snow-line, varying with the seasons. Southwards the contrast is perhaps still more striking between the rugged hills and the magnificent vegetation of the valleys, including as many as fifty species of the tulip.

The vast triangular space comprised between the Hindu-Kush and the Lahori chain is almost entirely occupied by mountain ranges falling gradually towards the south-west. Although European explorers have failed to penetrate into much of this territory, they have succeeded in measuring from a distance a large number of peaks ranging from 14,000 to 16,000 feet in height. Some of the crests within 24 miles of the Kabul River still retain an elevation of 10,000 feet, while their spurs, scored by erosive action, are continued southwards to the Sefid-Koh, forming a succession of wild gorges and ravines between the Kabul plain and the Peshawar basin. Some 60 miles south-west of the Anjuman Pass these rugged highlands are broken at short intervals by three profound fissures, through which the three rivers Panjir, Parwan, and Ghorband escape to the Kabul. Farther on the main range is continued by the Paghman chain, the first barrier which travellers have to cross on the direct route between Kabul and the Bamian Pass. After reaching the Unah or Honai Pass, about 5,000 feet high, this stony but far from difficult highway descends into the Hilmend valley, beyond which it winds up the Hajikak and Irak slopes. In 1839 and 1840 the English carried their field artillery without much difficulty over the Irak Pass.

The preference given to the Unah Pass as the ordinary caravan route explains the position of the Afghan capital in the narrow basin which it now occupies. As a city of war and commerce, it was necessarily founded in the immediate vicinity of the main route followed by caravans and armies. When the main highway crossed the Ghorband Pass, the capital stood at the outlet of three valleys, converging

towards the Daman-i-Koh plain, where all the paths are united from the eighteen practicable passes of the Hindu-Kush. Here doubtless also stood "Alexandria ad Caucasum," the city built by the Macedonian conqueror to guard the point where the routes diverge towards Bactriana. No better site could have been chosen, either for its strategic and commercial importance, or for the fertile soil, abundant water, and natural beauty of the surrounding district. Although standing at a mean elevation of 6,500 feet above the sea, the plain, the largest in the whole of north-east Afghanistan, lies in the same latitude as Cyprus, Crete, and Tangier. Hence it enjoys a temperate climate, with a vegetation corresponding to that of Southern Europe. Here the open spaces are shaded by the plantain; the apricot and other fruit-trees cluster round the villages; the mulberry and vine clothe the lower terraced slopes of the hills; grassy tracts, varied with tobacco and corn-fields, and the vivid colours of the garden-plots contrast pleasantly with the brown or yellowish hues of the rocky escarpments and the glittering peaks of the Hindu-Kush bounding the northern horizon.

East of the Daman-i-Koh, at the foot of the heights of Kohistan, and at no great distance from the Panjir River, lies the little desert of Reig Rawan, or "Moving Sands." Here the silicious particles blown about by the winds and falling into the rocky fissures of the ground produce a sound resembling the distant beat of the drum, accompanied by an aërial music like that of the æolian harp. Hence the legends of armies swallowed up in the sands, whose martial strains continue to echo beneath the surface.

West of the passes leading to Bactriana, the great divide, here about 120 miles broad, consists of steep parallel chains running mainly east and west. These highlands, held by the Hezareh tribes of Mongol stock, are still almost an unknown land, overshadowed, as it were, by the mighty Koh-i-Baba, which rises in isolated majesty north of the Upper Hilmend valley, to an extreme height of 17,800 feet. Another peak in the centre of the system also attains an elevation of over 16,000 feet, and there may be other snowy crests still farther west; for these highlands, apparently the Parapomisus of the ancients, are known between the sources of the Murgh-ab and the course of the Upper Heri-rud, by the local name of Sefid-Koh, or "White Mountains." Ferrier, who traversed them in the middle of July, expressly states that the elevated peaks are snow-clad throughout the year. Northwards they are flanked by another chain, also running east and west, the Tirband-i-Turkestan, southern rampart of the Oxus plains.

But as it advances westwards the Sefid-Koh falls gradually to the Mazret-i-Baba (Karrel-i-Baba) Pass, which is crossed by the Maimeneh route north-east of Herat, and which is free from snow from the end of April to December.* Farther on nothing remains except the low Barkhut ridge, falling to about 1,000 feet at the Cheshmeh-sebz and Khombu Passes on the route between Herat and the Murgh-ab plain.

The Upper Heri-rud valley is skirted southwards by the Siah-Koh, or "Black Mountains," which also run from the Koh-i-Baba east and west parallel with the

* Grodekov, "Bulletin of the Paris Geographical Society," August, 1880.

Sefid-Koh. South of Herat this range forms the continental water-parting, and is crossed at an elevation of nearly 6,500 feet by the direct route between Herat and the Hilmend basin. Its western continuation forms a junction with the Khorassan uplands at the pyramidal Siang-i-Tokhter, whilst on the south the territory of Gúr—that is, "highlands"—is scored by countless river valleys running mainly in a south-westerly direction towards the desert. But about the centre of this almost unknown rugged region rises the Chalap-dalan, which from its form and the multitude of hot springs welling at its foot appears to be of volcanic origin, and which is said by Ferrier to be "one of the highest on the globe." In the middle of July he saw it still covered with snow, below which its grassy and wooded

Fig. 10.—The Western Hindu-Kush.
Scale 1 : 2,900,000.

60 Miles.

lower slopes occupied a vast space studded with villages and nomad encampments. This appears to be one of the richest mineral regions of Afghanistan, containing unworked mines of gold, silver, copper, lead, iron, sulphur, coal, besides rubies and emeralds.

Besides the western Sefid-Koh, another system bearing the same name and far better known in the military history of Asia, occupies the north-eastern section of Afghanistan south of the Kabul River valley. Under its Afghan name of Spin-ghur, also meaning "White Mountains," the main range runs east and west for a distance of 120 miles at a nearly uniform elevation of considerably over 12,000 feet. The culminating peak, which has preserved its Sanskrit name of Sikaram, attains a height of 15,500 feet, and this is flanked eastwards by the Keraira,

almost rivalling it in altitude and majesty. Despite its name, the Sefid-Koh is not snow-clad throughout the year, nothing remaining from August to January but a few white streaks, except perhaps in some of the gorges sheltered from sun and wind. These imposing highlands, which everywhere abound in the grandest scenery, have been traversed in all directions by British officers and explorers, who ascended six of the highest summits in 1879. The Sefid-Koh lies on the British side of the "scientific frontier" recently laid down, but subsequently abandoned to the Afghan tribes. But the sites of future encampments and health resorts are marked on the charts in the neighbourhood of the passes, near the running waters and wooded slopes.

At its western extremity the Sefid-Koh projects northwards a number of spurs, radiating like the ribs of a fan in the direction of the Hindu-Kush system, from which they are separated only by the gorges of the Kabul River. Of these spurs the loftiest is the Karkacha ridge, terminating near the river in the Siah-Koh, or "Black Mountain," which is so called by contrast with the snowy peaks of the main range. The Karkacha is crossed by the pass of like name (8,000 feet), and farther north by the less elevated Jagdalak Pass, near Gandamak, names ever memorable in the annals of Anglo-Afghan warfare. The Lataband, Haft-Kotal, Khurd-Kabul and other passes over the more westerly spurs are all alike equally associated with the triumphs or disasters of the British arms during their three invasions of Afghanistan. The route skirting the southern foot of the Sefid-Koh has also acquired great strategic importance, and during the last war the Païwar-Kotal, south of Sikaram peak, and Shutar-gardan ("camel's neck") at the south-west corner of the Sefid-Koh, became familiar sounds.

At the eastern extremity of the main range the most famous pass is the Khaibar, which, to avoid the gorges of the Kabul River, bends south and west of Mount Tartara (6,850 feet), and rejoins the river over against Lalpura, 40 miles above the plain. The overhanging cliffs on either side are crowned with forts, some in ruins, some still standing; and other monuments, such as topes and tombs, attest the former presence of peaceful as well as warlike elements; for the Buddhist missionaries had frequented this route long before it was followed by Mahmud the Ghaznevide, Baber, Akbar, Nadir Shah, Ahmed Shah, and the British generals. Here Akbar constructed a waggon-road; but Alexander and the first conquerors of India appear to have passed north of the Kabul River through the Yusuf-zai territory.

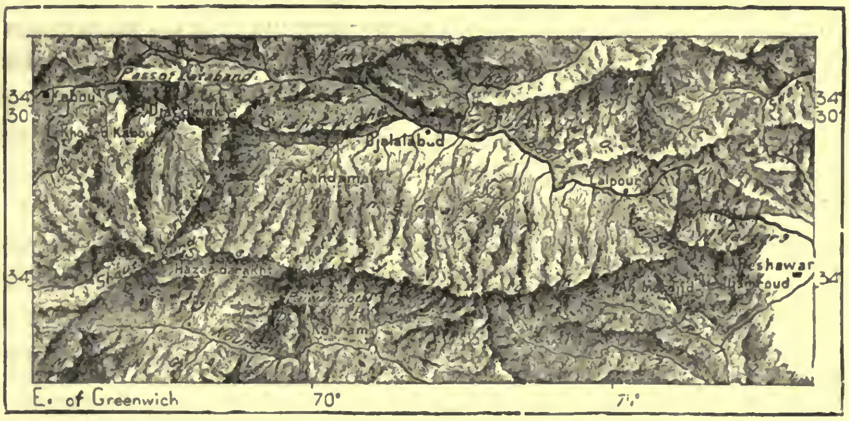
The southern ramifications of the Sefid-Koh may be regarded as collectively forming the outer scarps of the Afghan tableland. Each of the successive terraces is separated from the previous by a border chain less elevated above its western than above its eastern base. Hence in ascending from the banks of the Indus to the grassy inner steppes, the traveller passes through a series of steep slopes, separated from each other by terraces of varying width. The chain usually known as the western Sulaiman-dagh is the loftiest, if not in its isolated peaks, which have not yet been surveyed, at all events in the mean altitude of its crest. South of the Shutar-gardan Pass, separating it from the Sefid-Koh, it runs mainly in the

direction of Baluchistan, where it forms the outer wall of the plateau west of the Kachi-Gandava deserts. The western Sulaiman-dagh thus constitutes the parting-line between the waters flowing east to the Indus, and west to the inland basins of the tableland. It also forms a political frontier between the western tribes, who recognise the Amir's authority and those to the east, who still enjoy a certain independence, and pay the taxes only when they cross the border with their flocks.

On most maps another central Sulaiman chain is traced from Mount Sikaram in the Sefid-Koh southwards beyond the Païwar-Kotal; but it does not appear to form a continuously regular range, natives who have traversed the country speaking only of a rugged plateau without any well-defined mountain system. Still farther east the various ridges, exclusive of the detached groups projecting towards the Indus, are all comprised under the general name of the Eastern Sulaiman-dagh, or Mihtar Sulaiman. Although cut into numerous sections by the Kuram, Tochi, Gomul, Zhob, and other streams rising in the western ranges, they

Fig. 11.—The Sefid-Koh of East Afghanistan.

Scale 1 : 2,400,000.



none the less constitute a remarkably uniform orographic system. Wooded slopes are rare on the scarps facing the Indus valley, which in the glare of the sun glow like a furnace, while the heat reflected by their white, red, or yellowish rocky walls becomes at times quite intolerable.

The various lateral sandstone or limestone chains run in nearly parallel lines either north and south or north-east and south-west, and all slope gently westwards, but fall abruptly towards the Indus. South of the Gomul Pass there are seven of these parallel ridges, and still farther south as many as twelve have been reckoned near the Suri River. The higher western ranges visible above the others from the Indus valley are sometimes by the Afghans called the Koh-i-Siah (Siah-Koh), or "Black Mountains," while the lower part of the system is designated by the name of Koh-i-Surkh (Surkh Koh), or "Red Mountains." At intervals the ranges are pierced by *darahs*, or gorges, between whose vertical walls intermittent torrents rush down during the rainy season. The Eastern Sulaiman-dagh culminates with

the Pirgul peak (11,800); but the most famous group is the Takht-i-Sulaiman, or "Throne of Solomon," whose twin peaks are visible from the plains. The northern and most elevated (estimated at from 11,000 to 11,400 feet) is one of the many spots where Noah's ark is supposed to have rested, while a niche cut in the rock represents the "throne" whence Solomon contemplated the vast abyss of the universe. Towards the southern extremity of the Sulaiman-dagh occurs the wooded and well-watered Borai valley, which, thanks to its easy incline, seems destined one day to become the chief route from Multan to the Afghan plateau.

West of the border range the section of the plateau comprised between the northern and eastern highlands is intersected by no ridges rising more than 2,000 or 2,500 feet above the surrounding country. Except at their junctions, these ridges run uniformly north-east and south-west, falling gradually towards their southern extremity. The most important between the Hilmend and Tarnak Rivers is the Gul-Koh, or "Blue Mountain," so named from the flowers covering its slopes. North of Ghazni the Sher-dahan Pass, leading to the Logar valley and Kabul, still maintains an elevation of 9,000 feet, whereas the crests overlooking the plain of Kandahar nowhere reach a height of 6,500 feet.

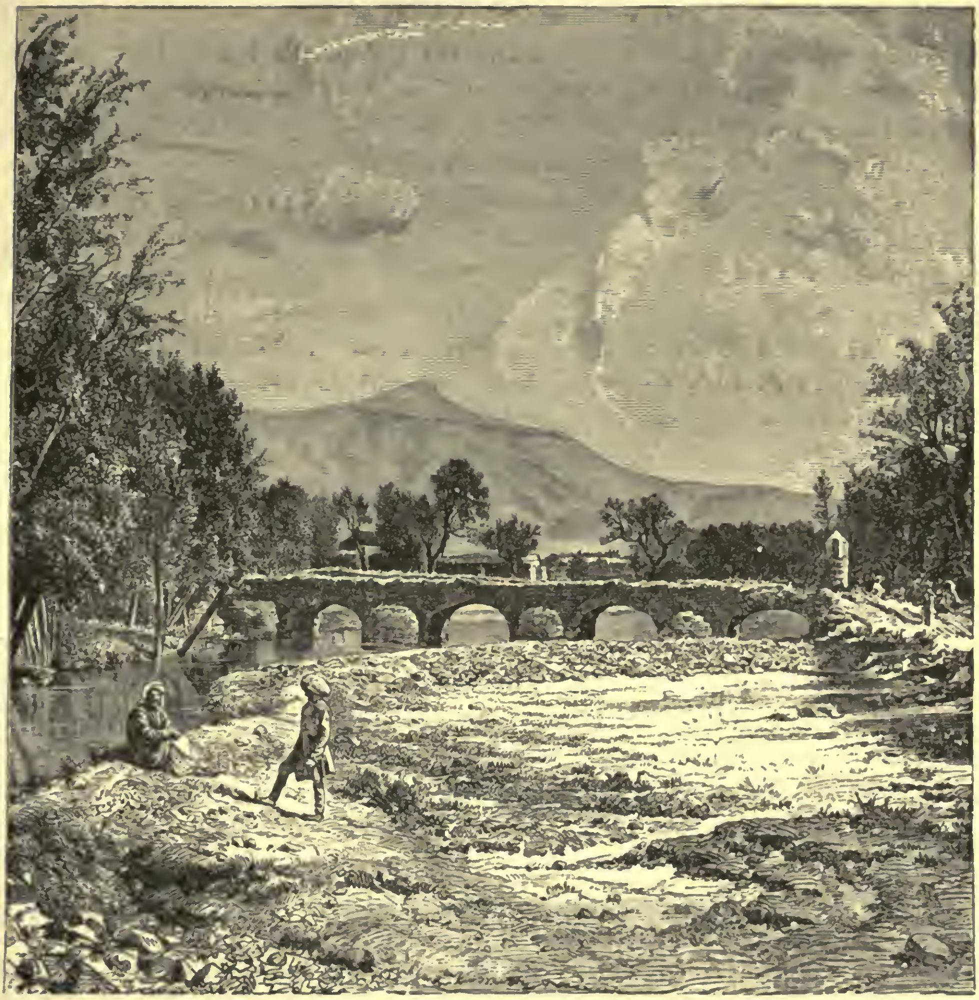
South of the Kandahar plain other chains connected with the main range of the western Sulaiman-dagh rise to a considerable elevation, forming towards Baluchistan a double barrier, which the English still hold as their most advanced outpost since their withdrawal from Kandahar. The Khwaja Amran, or northern ridge, is crossed by the famous Khojak Pass at an elevation of 7,600 feet. Although this route has been usually followed by the British armies, the line of the future railway to Kandahar has been traced through the far less elevated Gwaja Pass, beyond which the hills merge in the Shorawak territory, west of the farthest point surveyed by the English officers. The ridge running south of the Khwaja Amran, although higher, presents more practicable passes. Here the Takatu, with its twin peaks, attains an altitude of over 12,000 feet. Between the two ranges stretches the fertile Pashang basin, wrongly called the Pishin valley, a district of great strategic importance, traversed by the brackish Kakar Lora, the official frontier towards Baluchistan.

Afghan River Systems.

All the Afghan rivers, except those rising in the Hindu-Kush and eastern Sefid-Koh, flow to closed basins, or else run dry in the sands before reaching their natural seaward outlets. Nearly all the waters of the north-east highlands are collected by the Kabul River, whose volume is probably equal to that of all the other Afghan streams together. The Kophes, Kophen, or Kabul, whose valley has been followed by all the conquerors of India, rises at the foot of the Paghman hills, and below the city whence it takes its modern name is joined by the more copious Logar, fed partly by the torrents flowing from the Ghazni hills. Farther down comes the Panjir, formed by all the streams which the snows of the Hindu-Kush send to the Daman-i-Koh plain. Below this confluence the main stream

receives on both its banks smaller contributions from the Nangnahar uplands on the south and the Lakhman or Lamghan district on the north. A few miles below Jalalabad the Kabul is probably doubled in volume by the Kunar, which rises at the Baroghil Pass, under the name of Mastuj, and takes the appellation of Chitral and Kamah. As in Kashmir and the Himalayas, the torrents in this highland region are crossed by frail bridges of the willow and twining plants; but large rivers, such as the Kunar and Swat, are traversed by means of inflated skins, as in the Panjab.

Fig. 12.—The Kabul River—View taken near Cuzergao, Shardeh Valley.



The last important stream joining the Kabul is the Swat, with its tributary the Panjkora, often called the Landi Sind, or "Little Indus," to distinguish it from the Abu Sind, or "Great Indus." In the British province of Peshawar both streams mingle their waters, and after irrigating the whole of the Peshawar plain, the Kabul seems scarcely inferior in volume to the Indus at its confluence with that river above Attock.

South of the Sefid-Koh the Kuram is the only perennial stream flowing east to

the Indus. All the rest, rising on the Sulaiman slopes, either run out in the sands or are exhausted in irrigating the land before reaching their natural outlet. Thus the Gomul, with a basin, according to Walker, 13,000 square miles in extent, and which sometimes spreads out to a width of 10 miles on the plains, remains without a drop of water during the dry season. In Afghan Turkestan, the rivers of the Khulm, Balkh, Siripul, and Maimeneh districts also run out before reaching the Oxus. In the same way the Murgh-ab is used up in the irrigation canals of the Merv oasis; while the Heri-rud, or "river of Herat," rising between the Sefid and Siah-Koh, after a longer course westwards to the Persian highlands, ultimately disappears in the Turkestan sands under the name of the Tejen (Tejend). Ferrier was informed by the natives that before the end of the last century its lower course lay much farther to the right, in the direction of the Murgh-ab; but in any case it fails at present to reach the dried-up lacustrine depression which, according to Lassar, stands at a lower level than the Caspian.

The only closed basin comprised entirely within Afghan territory is that of the Ghazni, which has an area of about 7,000 square miles. Rising on the southern slope of the hills which send most of their drainage through the Chintz, Logar, and Kabul to the Indus, the Ghazni, after receiving numerous small tributaries, flows beyond the Band-i-Sultan, or "Sultan's Dyke" raised by Mahmud the Ghaznevide, first south and then south-west, in the direction of the affluents of the Hilmend. But during its progress across the arid plains of the Ghilzai nomads it generally diminishes in volume, and at an elevation of 7,000 feet loses itself in the highland lake Ab-Istada. This "sleeping water," as its name is interpreted, has a depth of less than 14 feet in the centre, and is so brackish that the freshwater fish of the Ghazni perish on reaching the lake, which is said to have overflowed in 1878 into the Hilmend basin.

The salient features of Lake Ab-Istada are reproduced on a vaster scale by the Hamun basin, which, besides about half of Afghanistan, embraces a considerable portion of Persia and Baluchistan, with a total area of perhaps 200,000 square miles.

The Hilmend, which is the main artery of this hydrographic system, has a course of over 600 miles, and is the most copious Asiatic river between the Indus and Tigris. By the Great Moghuls it was regarded as the moat dug by nature's hand round Kandahar, bulwark of their empire towards the west. Other streams, also some hundreds of miles in length, such as the Rud-i-Sabzawar (Harut-rud), the Farah-rud and Kash-rud, drain to the Hamun depression, although during the dry season their course is marked only by the tamarinds, mimosas, and dwarf palms fringing their banks. At other times they form broad impetuous watercourses, flooding the plains and stopping all caravan traffic for weeks together.

The Hilmend (Helmand), which rises 36 miles west of Kabul, between the Paghman and Koh-i-Baba, flows first for a long way at an elevation of 11,500 feet through a little-known highland region. After skirting the grassy Zamindwar Hills, it sweeps into the plains, a broad majestic stream 3,000 feet wide at high-water, and with a mean width of over 1,000 feet. Here it receives during the floods its chief affluent, the Argand-ab, swollen by the Tarnak, Arghesan, and

Dora, whose converging waters near Kandahar give to that city such paramount commercial and strategic importance. But at ordinary times these streams, exhausted by irrigation works, send but feeble supplies to the Argand-ab, which, 15 miles from its confluence, is arrested by the "Dyke of Timur," a dam by which all its waters are diverted and distributed over the plain. The Hilmend also sends its overflow through a network of canals to the Germsil, or "Hot lands," a fertile tract bordering its banks at a mean distance of about a mile. The remains of former embankments attest the care with which its inhabitants, at one time far more numerous than at present, regulated the discharge of the Hilmend, whose very name, reproduced under the Greek form of Arymanthus, is said to mean "embanked river."

The Sistan Depression.

The lower part of Sistan (Seistan), figured on most maps as a lake, or at least a swamp, is, for the most part, simply a waterless plain. Far from presenting any obstacle to intercommunication, it is more easily traversed even than the surrounding lands, which are intersected by irrigation canals, strewn with boulders, or covered with dunes. Such an easily accessible region could never constitute anything more than a conventional frontier, and Persia has now seized the most fertile tracts east of the pretended lake. Here pass the most frequented routes, along which the depression is recognised only by the freshness of the vegetation, interrupted, however, at several points by white patches of saline efflorescence and moving sands. But northwards stretches the Naizar, a sea of stunted reeds, yellow in the dry season, but while tender affording pasture to the cattle of the nomads.

South of this tract the limits of an old lacustrine basin are indicated here and there by argillaceous banks, still washed by the overflowing waters during the floods. In the midst of the basin rises a solitary bluff, the Koh-i-Kwaja, or Castle of Rustem, which Nadir Shah besieged in vain. But north of the marshy district stand several other rocky heights, which, like the Koh-i-Kwaja, are of basaltic formation.

South-east of the Sistan depression stretches the Zirreh (God-i-Zirreh), another dried-up basin covered with a saline efflorescence. All the streams flowing from Baluchistan in this direction are completely evaporated on emerging from the hills, and recently Colonel MacGregor skirted the Zirreh for two days and a half without finding a solitary pool of brackish water.*

In its widest extent the Sistan depression develops a crescent 240 miles long, parallel with the course of the Lower Hilmend, and at an elevation variously estimated at from 1,200 to 1,500 feet above the sea. Here is consequently the lowest ascertained level in Afghanistan.

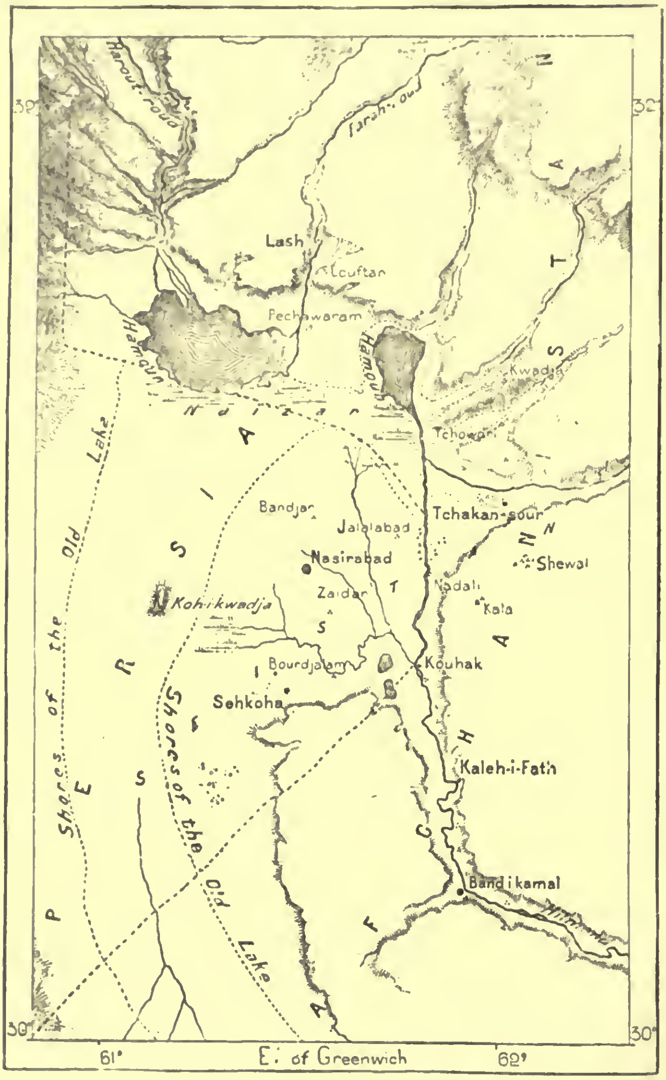
The present lakes, known to the Persians by the name of Hamun—that is, "expanses"—are nothing but lateral expansions of the rivers that reach the low

* "Wanderings in Baluchistan," 1882.

and level region of Sistan. On their maps recent travellers show us two such basins, one to the west formed by the Harut-rud and Farah-rud, the other to the east, fed by the Kash-rud and Hilmend, both incessantly fluctuating with the lower course of the streams contributing to their formation. During the floods

Fig. 13.—The Hamun Basin.

Scale 1 : 1,800,000.



30 Miles.

these streams send down much alluvial matter, which is deposited in the lowest parts of the depressions. But at other times the streams, failing to reach the lakes, take advantage of the least apertures along their banks to flood the plains. The shifting of their course is further facilitated by the irrigation canals excavated on both sides of their beds. Along the Hilmend some of these canals, receiving

most of the current, become each in its turn the main stream, and again disappear between the dunes lining their banks. The local hydrography has thus for ages never ceased to change, as attested by the descriptions of the oldest writers and most recent explorers. The shiftings of the Hilmend, and consequent displacements of the Hamun, take place within an area upwards of 90 miles in length, and at least 50 miles wide.* In this area traces everywhere occur of the old beds of the Hilmend. Before 1830 it flowed west, and then formed a "hamun" near the Koh-i-Kwaja eminence. But after a great inundation it forsook this channel, and turned northwards to an outlet 60 miles north-west of the previous basin. These changes also necessitate modifications in the system of canalisation. Towns and villages thus frequently become displaced and few other regions present so many ruins, mostly however mere heaps of rubbish, without any remains of monumental structures.

A solitary species of fish, by Goldsmid called a barbel, inhabits the Sistan waters, which are frequented by such countless flocks of geese, ducks, and swans that the sun becomes eclipsed when they rise on the wing. One of these flights seen by Khanikov formed a compact square mass considerably over half a mile on all four sides. The natives pretend that they can foretell the level of the next floods by the height at which these birds build their nests above the water.

Climate—Flora—Fauna.

Afghanistan is, on the whole, a badly-watered region, and enjoys a rainfall far inferior to that of Western Europe. The plateaux limited eastwards by the Sulaiman-dagh are comprised with India in the range of the south-west trade-winds. But the atmospheric currents which discharge such copious downpours along the Malabar coast derive their moisture from the Indian Ocean, whereas Baluchistan and Afghanistan are exposed rather to dry continental breezes blowing from equatorial Africa along the north-west seaboard, and crossing in their course only two arms of the sea, the Gulfs of Aden and Oman. The humidity acquired by deflections to the Indian Ocean is reserved almost exclusively for the lofty Koh-i-Baba, Hindu-Kush, and the two Sefid-Kohs in the north and east.

Thus, despite its proximity to the sea, the Afghan plateau comes within the zone of continental climates, along the track of the winds blowing from the Upper Nile and Arabia. Hence many of its solitudes present the same appearance as those of Persia, which are also exposed to dry winds. Like all lands affected by a continental climate, Afghanistan is subject to great and sudden changes of temperature. On the bare rocky or argillaceous elevated plateaux the transitions are very severe, not only from season to season, but even from night to day. Thus snow falls occasionally even at Kandahar; and in the Herat district, of Ahmed Shah's army as many as 18,000 men are said to have perished of cold in a single night. On the other hand, although Ghazni stands at an altitude of 7,800 feet, its temperature is reported to have reached 130° F. in the shade—a heat all the more intolerable that it had been

* Rawlinson.

preceded by a cool night. Hence to Ghazni, as to Aden, Mascat, Bushir, Shikarpur and other eastern cities, the well-known saying has been applied: "Since thou hast made this furnace, what need, O Allah, hadst thou to make hell?" Still more oppressive is the heat when the sands of the desert are raised and sent whirling before the wind over the face of the land. Afghanistan is one of those regions which are most frequently exposed to these frightful sandstorms; while in Sistan the wayfarer has been stifled by the fiery midday blast, which here at times resembles the African simoon.

The violent changes of temperature have also the effect of stimulating evaporation, partly through the intense heat, partly through radiation into the rarefied atmosphere. Thus is further diminished the scanty supply of water, which the Afghan and Persian cultivators are obliged to economise by the skilfully-constructed *khariz*, *karez*, *kanat*, or underground aqueducts, made in imitation of the rivers which flow in the galleries of the limestone rocks. In every badly-watered district of Afghanistan villages and hamlets are met whose names recall these indispensable works. Some, such as that of Ghazni, are from 20 to 25 miles long, and receive countless underground tributaries flowing from reservoirs at depths of 150 and even 300 feet and upwards. Vertical shafts sunk at certain intervals enable the people to descend in order to clear out the canals and strengthen their walls. The rubbish accumulated in heaps at these openings marks from a distance on the slopes of the hills the course of the subterranean rivulets.

The dearth of water and the sudden transitions from cold to great heat, combined with the elevation of the land, tend to impoverish the Afghan flora. Even compared with the parched hills of the Panjab, many districts in the Sulaiman highlands and on the plateaux appear destitute of verdure. In some places nothing is visible except the bare rock, with perhaps a little herbage in the hollows, fed by the moisture oozing amid the scattered boulders. The hamlets are elsewhere surrounded by a few dwarf palms, olive, and fruit-trees, while the streams are fringed with the cypress, willow, and poplar. Throughout more than half of the country vegetation is represented only by some green patches amid the white, gray, or reddish waste of argillaceous clays and rocks. So great is the contrast between the naked slopes and the oases at the foot of the hills that the marauding tribes look on it as a sort of "providential" arrangement. "Others," they say, "have the fertile lands, but we have the strength," that is, to plunder them.

But the lack of variety in the vegetation and the absence of a rich foliage are at all events balanced by the excellent flavour and quality of most fruits and cereals, such as the walnut, apricot, peach, plum, almond and several kinds of corn. The pomegranates of Kandahar are pronounced by Ferrier to be the finest in the world; the wild vine of Kohistan yields a delicious grape to a height of over 6,000 feet on the slopes facing southwards; and the walnut, here a forest tree, attains colossal proportions, especially in the Upper Kuram valley, where the trunk sometimes exceeds fifteen or sixteen feet in girth.

Vegetation is naturally most vigorous in the well-watered region of the north-east. In the upland valleys of the Hindu-Kush and Lahori, as well as on the

VIEW TAKEN FROM THE PAIWAR PASS.

Sefid-Koh slopes, the goat browses on the tender sprouts down to a height of 7,000 feet. The plantains growing on the terraces near the Paiwar Pass have a circumference of over 33 feet. The oak is elsewhere followed higher up successively by the deodar, yew, juniper and various species of conifers, one of which flourishes on the Sefid-Koh at an altitude of 11,000 feet. Farther up nothing is met except the stunted junipers and birch, which are succeeded by herbage and the carex as far as the snow-line. In the Sulaiman-dagh the shrubs are of the Himalayan species, whereas the herbaceous plants are allied to those of the west; but in other respects both the Himalayan and Afghan floras have much in common with those of Europe. The date-palm grows only in Sistan, and the myrtle a little farther north in the Anarderch district.

Nor is the Afghan fauna remarkable for many characteristic types. The lower valleys near the Panjab are infested by the leopard, hyena, and jackal of the plains, while the Hindu-Kush regions, like the Karakorum, Himalaya, and Trans-Himalaya, have mainly a Tibetan fauna, including the chamois, various species of wild goat, the black and brown bear, wolf, and fox. The wild boar has his lair amid the rush-grown swamps of the Hamun; the rat-kangaroo, which hibernates from September to April, is met in multitudes on all the stony wastes; while the gazelle and wild ass abound on the southern plains, as well as in the neighbouring solitudes of Sistan and Khorassan. In the seventeenth century the rhinoceros still survived in the forests above Peshawar, where it afforded sport to Akbar and Jahanghir. Elphinstone and Raverty speak of lions still to be seen in the hot valleys, although observed by no naturalist, and Blandford questions even the presence of the lion. The dromedary and camel of Sistan are famous for their strength, speed, and endurance; and in some hilly districts, notably amongst the Char-Aimaks, these animals, useless as beasts of burden, are reared solely for their hair, used in the weaving of the tent canvas. The sheep of the Zamindwar and Aimak districts yield perhaps the finest wool in Asia. But the Herat horse is inferior to the Turkoman, while elsewhere almost the only equine species met with is the zabu, an ungainly, short-legged animal used exclusively as a beast of burden.

Inhabitants of Afghanistan.

The name given by the people themselves to the region comprised between the Indus and Persia is not Afghanistan but Pukhtun-Kwa, or "Land of the Pakhtana," or Afghans.* In India the Pakhtanah are collectively known as Rohilla, or "highlanders," and more commonly as Pathans, obviously from the native name Pukhtun. The term "Afghan" is perhaps derived from the Sanskrit Acvaka (Assaka), that is, "horsemen," a title due to their mounted bands sweeping across the plains of the Indus. According to a local tradition they claim a Jewish origin, regarding Saul as their ancestor. But no serious importance can be attached to such pretensions, common enough in a region where every other chief traces his

* *Pukhtun*, *Pushtun*, pl. *Pakhtanah*, *Pashtana*, according to the dialects, is the collective national name. The language is *Pukhtu* or *Pushtu*.

genealogy back to Alexander, and where whole tribes boast of their descent from the mythical Persian heroes Rustem or Jemshid, or from Mohammed, the prophet of Allah. Doubtless amongst the Afghans, as well as amongst the Tajiks and other Iranians, men are frequently met distinguished by the eagle eye, aquiline nose, thick lips, and bushy beard of the typical Semitic trader. But this is not very surprising in a country lying on the main route of wars and invasions between India and Hither Asia—a country where the races have been incessantly intermingled through migrations, conquests, and tribal warfare. The earliest records show us the Afghans as a group of highland clans on the west frontier of India; but by gradually encroaching on the surrounding districts, eastwards as far as the Ganges basin, westwards to Sistan, these clans became united with divers other peoples, imposing on them their own name and speech. Dorn and Lassen have identified the Pukhtu nation with the Paktiyces of Scylax, quoted by Herodotus, a people who dwelt west of the Indus basin towards the south-east of Persia. This term is not mentioned by the historians of Alexander, although the national names of many Afghan tribes have been recognised in the nomenclature of the Sanskrit poems.

The Pukhtu language is a member of the Aryan family, and the Semitic words found in its vocabulary are derived not from the Hebrew but from the Arabic, since the conversion of the natives to Mohammedanism. The current alphabet is also the Arabic, which is so ill-suited for the transcription of the sounds of an Aryan language. In this family philologists have not yet determined the exact position of Pukhtu, some deriving it from the Zend, others, with Trump, regarding it rather as intermediate between the Persian and Indian branches, but approaching nearer to the latter. Harsh and guttural, "as if the cold winds blowing from the Hindu-Kush compelled the people to speak with half-closed lips," this language is regarded as one of the least agreeable in the East—"a language of hell," according to a saying groundlessly attributed to Mohammed. The national literature is not so poor as had till recently been supposed. It comprises heroic poems and love songs, some of which have been collected by Raverty, besides some theological, legal, and even grammatical writings. The sciences are taught in Persian, and the authors most highly appreciated are the poets of Iran. The Pakhtanah are extremely fond of singing and music, and amongst them the Hindu traders always find a ready sale for their flutes.

Most of the Afghan tribes are noted for their robust frames and muscular energy. The men are vigorous and well made, with long head, prominent cheekbones, large nose, very thick lower lip, bushy eyebrows, coarse hair, and beard nearly always black. The fair or chestnut type is found almost exclusively amid the Kafiristan highlanders, who are of a different stock. But the western tribes towards the Persian frontier have a lighter or more olive complexion than those in the eastern uplands, whose dark brown colour resembles that of their Rajput neighbours. Compared with the Persians the Afghans are rude, almost coarse, and careless of outward show. But they are skilful artisans, hospitable, generous, and even truthful, at least in peaceful times, when not inspired by the evil passions

stirred up by war—cruelty, revenge, stratagem, and love of pillage. "The man who shuts his door to the stranger is no Afghan," says the national proverb. The women are generally much respected, and manage the household with intelligence and firmness. "Go to India for wealth, to Kashmir for pleasure, but to the Afghans for a wife," says an Oriental proverb. Temperate and discreet, and ever eager for enterprise, the Pukhtun readily sacrifices comfort for work; but he does not put up his freedom for a price, like the Persian and Hindu. While absolutely resigned to inevitable misfortunes, he resists oppression energetically, except, perhaps, at court, where prevail the capricious and cruel habits of despotic power. Most English travellers complain of the extreme bad faith of the Afghans. But it should be remembered that Europeans enter the land generally as conquerors, so that their very presence is regarded as an insult. Hence it is not surprising that in their weakness they have recourse to every sort of ruse and stratagem against the hated invader. And when their hatred is once roused, they certainly yield to it with passion and perseverance. "God shield you from the vengeance of the elephant, cobra, and Afghan," is a saying current amongst the Mohammedan Hindus.

The various tribes, all claiming some patriarchal forefather, form so many separate little commonwealths, each again divided into clans and septs (*zai* or *khel*), some of which consist of but a few families. All these groups have the same organisation. The smallest clan, the most insignificant khel, has its chief, usually chosen for his birth, while each tribal group is governed by a khan, mostly appointed by the Amir of Afghanistan, but also at times chosen by the tribe. His authority is not absolute, all weighty matters being decided by the *jirga*, or assembly of headmen, which alone in its collective capacity can confer on the khan the necessary sanction for his acts. In these gatherings of the elders the tribe seldom fails to recognise the true sovereign power, for the old communal spirit still survives. Ahmed Shah himself, conqueror of India and absolute master of millions beyond the frontiers, in his own country was only the first chief amongst others his equals by right. Nevertheless the balance of power oscillates greatly according to the thousand vicissitudes of personal rivalries, feuds, and wars, by which the country is continually harassed. Hence the occasional appointment of a dictator, entrusted with supreme control during critical times, but who, the danger past, withdraws to private life, laying aside all prerogatives over the other members of the tribe. Frequently, also, temporary combinations are formed amongst several tribes, when the united jirgas constitute themselves a national convention for carrying on war or concluding peace. But whether swayed by amir, khan, or jirga, the Afghan still fancies himself free. "We are all equal," they are constantly assuring the English traveller, and on his boasting his monarchical institutions, "we prefer our dissensions," they reply. "Let our blood flow, if needs be, but we will have no master." And if local feuds are frequent, the tribes at a distance from the large cities escape, on the other hand, not only from a system of unlimited oppression, but also from the general revolutions which decimate the inhabitants of some other Asiatic lands subject to capricious autocrats.

Few of the tribes have ever had any slaves, for the Afghan considers it a crime to "sell men." He may kill, but will not degrade them.

The custom of hereditary vengeance still survives, and certain tribes are always at war, not for any definite interests, but for the "price of blood." Recourse, however, is often had to mediation; the jirga interferes, and occasionally a khel is chosen to arbitrate between two hostile groups, in which case the guilty side is usually sentenced to surrender one or more marriageable women to the family of the offended tribe. This is one of the chief causes of the mixture of blood observed amongst the various Afghan communities. Crossings are also occasioned by the rites of hospitality. Strange families are generously welcomed into the clan; lands are shared amongst them, and their chief is admitted to the tribal council, although these guests may still continue to govern themselves by their own usages. Besides such specially-favoured strangers, there are others, the "hamsoyeh," or "neighbours," who are regarded as the "clients" of the tribe, and who, as a rule, are not admitted to the ownership of the land they cultivate. But in the course of one or two generations even these generally become fused in the friendly tribe. On the other hand, the clans themselves may become broken into hostile factions through some private wrong or public difference. The postfix *zai*, or "son," attached to so many tribal names, does not necessarily imply real descent, and is now often merely a distinctive sign without any definite value. Thus during the boisterous days preceding the last British invasion, the Kabuli people were divided into Cavagnari-zais, favourable to an English alliance, and Yakub-zais, who sided with the amir Yakub against the foreigner. Common interests also frequently group the tribes of one district against those of another, irrespective altogether of ethnical affinities. Thus the Logari, or people of Logar, whether Ghilzais or Tajiks, will combine against other Ghilzais and Tajiks of the Laghman territory.

The contradictory statements of travellers, caused by the complexity and shiftings of the tribal names, prevent any strict classification of the khels according to common descent. The official tables published by the English envoys and by the Russian staff have merely a remote resemblance to each other. Still a general classification may be attempted, such as that published by Professor Keane in a recent issue of *Nature*.* According to all writers, of the 400 different khels the dominating tribe is that of the Durani, of which the present reigning family is a member, and which comprises perhaps a fifth of the whole population south of the Hindu-Kush. At the beginning of the last century this tribe was called Avdali (Abdali); but Ahmed Shah having, on the death of Nadir Shah, assumed the title of Durr-i-dúrán ("Pearl of the Age"), his people have since been known as Durani. Their territory comprises most of South Afghanistan, all the middle Hilmend valley between the Ghilzai country and Sistan, the plain of Kandahar, Zamindawar, and the hills about Farah. In this tribe the pastors are very numerous, and are all nomads, possessing at least two camping-grounds, the Kishlak, or winter station of the plains, and the Ailak, or summer station on the hills. Proud of their relationship with the royal family, the Durani—and especially

* "Afghan Ethnology," by A. H. Keane, in *Nature*, Jan. 20, 1880.

the Popalzai, Ahmed Shah's clan, and the Barakzai, that of the reigning amir and of most of the Government functionaries—have shown themselves less jealous of their republican institutions than the other Afghan tribes.

North-east of Kandahar the upland valleys and plateaux limited eastwards by the Sulaiman-dagh belong to the Ghilzais or Ghiljis, called also Mattai, who form a group of about fifty clans, all claiming a Tatar origin. They are supposed to be the Khilji or Khalaji of Arab writers, and to have migrated from the west about the tenth century. They soon embraced the Moslem faith, without, however, abandoning certain practices of the ancient Christian worship which they are traditionally said to have adopted at a still earlier period. Although keeping aloof from the other tribes, they now speak the common Pukhtu language, and differ in no respect from the ordinary Afghan physical type and usages. Hence, whatever their origin, they have now become entirely assimilated to the other Pakhtanah, amongst whom they are generally distinguished by their noble bearing and regular features. They were formerly the most powerful tribe in the country; but they fell to the second position apparently through the exhaustion caused by the foreign wars carried on during the early part of the last century, when they conquered Persia and laid Ispahan in ruins. Amongst them the republican spirit has been preserved much better than amongst the Durani. Every clan, almost every family, is independently administered, seldom interfering in the affairs of the neighbouring communities. Peace is also generally maintained between the clans, except during times of general disturbance, such as that caused by the conscriptions for the amir's armies. The Ghilzais are extremely hospitable, and maintain in every clan a special functionary charged with the entertainment of strangers. Their largest branch are the Sulaiman-khels, who comprise numerous nomad clans in the Sulaiman hills. The southern shepherds are obliged periodically to follow their flocks down to the neighbouring plain of Kandahar, and they thus become reluctant tributaries to the Durani. Those of Kabul, mingling with the various races attracted to the capital by trade, wars, and intrigues, have mostly lost their national characteristics; but it was they who took the chief part in the destruction of the British forces during the retreat through the Khaibar Pass in 1842.

The north-eastern tribes, occupying the Kabul River basin and surrounding heights, are sometimes classed together as Bardurani, a collective name imposed on them by Ahmed Shah, but never recognised by the clans themselves. Here the largest group are the Yusuf-zais, or "Sons of Joseph," who are settled chiefly in the northern valleys, but some of whom also occupy the hills about Peshawar. According to Elphinstone, they number as many as 700,000 altogether, and Raverty credits them with 100,000 "swordsmen." Like the Ghilzais, they are grouped in a multiplicity of clans, but their national customs have been much modified by their repeated incursions into the rich plains of India, by their habit of taking service under foreign princes, and by their intercourse with the traders of all races constantly passing through their territory. Intestine feuds are very frequent amongst them, thanks, as they say, to the dying blessing of one of their saints: "You will always be free, but never united." Like the old Jews, the Yusuf-zais,

Mahomed-zais, Swati, and other neighbouring tribes redistribute their lands at intervals of ten, twenty, or thirty years, the occupiers changing domicile in order to take possession of the fresh lots assigned to them. Whoever objects to his share or wrangles about its limits is expelled from the tribe, losing at once land, wife, children, and civil rights. This custom, which recalls the old communal system of tenure, does not prevent their fields from being well tilled, although in many districts the introduction of slave labour has caused a great decline of agricultural and other industries. Various clans reduced to captivity, as well as the prisoners of war formerly brought back from India, have been distributed amongst the Yusuf-zai and Swati tribes, and these *fakers*, as they are called, are occasionally allowed to trade in the villages, or to ply some personal occupation, for which they pay a tax to the owners besides the tribal impost.

The Swati, so named from the river valley where they occupy numerous large villages, greatly resemble the Yusuf-zais, from whom they are, however, distinguished by sundry practices. Thus the dead are buried in the fallow lands about to be reclaimed, and when the husbandman comes along with his plough, he cries out: "Get up! get up! here comes the plough!" Then if the bodies get ploughed up and the mangled remains strewn over the ground, it does not matter, because "the dead have gone to holy Mecca." South of the Swati dwell the Momands on the banks of the Kabul River, near the Afridi clans, who hold the eastern Sefid-Koh valleys, and who accept a subvention from the British Government to keep the roads open between Peshawar and Kohat. West of them are the less warlike Shinwarí, on the trade route to Kabul, against whom the amir had to send an expedition in 1883. Still farther west and south-west the parallel Sulaiman ranges and valleys are occupied by semi-independent clans, whose allegiance oscillates between the amir and the British raj, according to the vicissitudes of wars and migrations. Thus the Bangashes, formerly of the middle Kuram (Kurmah) valley, have moved down towards Kohat, and are now mostly under the jurisdiction of the English, to whom they supply numerous mercenaries. Their old lands have been occupied by the Shiah-Turi, who are also seeking the protection of the Indian Empire against the fanaticism of their Sunnite neighbours.

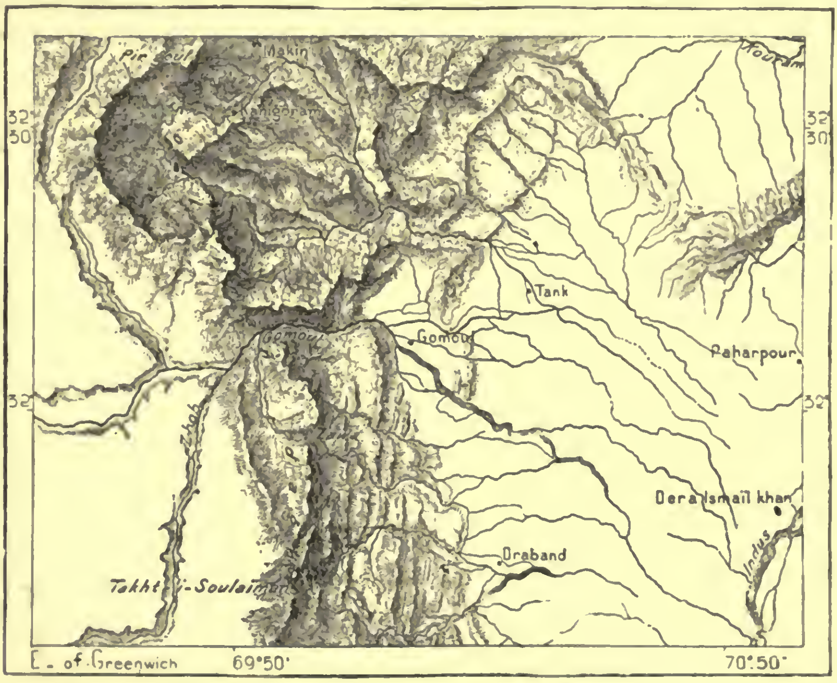
But most of the tribes reject all political allegiance as soon as the foreign troops have quitted their hills. Such are the Jaji of the Upper Kuram valley, deadly enemies of the Turi and British alike, and unfortunately divided also amongst themselves by hereditary feuds, or "exchanges," as they call them. The quarrel begins nearly always between the father-in-law and son-in-law, and is caused by the latter attempting to abduct the betrothed instead of paying the heavy price set on her by her friends. Then blood is sure to flow, for the father must either kill the ravisher or fall at his hands. Nor have the Mangals, Khosti, and other turbulent neighbours of the Jaji much greater respect for human life.

The numerous Waziri-khels have their camping-grounds on the outer terraces of the Sulaiman-dagh south of the Bannu River. Although claiming political independence, they may be regarded as having been definitely brought within the British system, thanks to the yearly migration of large numbers to the plains of

the Indus. Amongst them are the fierce and daring Mahsuds of the Shaktu valley, who were, so to say, discovered during the late Afghan war. They fight with short sword and buckler, and use the sling with great skill. But notwithstanding their warlike spirit, the Waziri open their territory for the passage of caravans of the Povindahs, or "Runners," belonging mainly to the great trading tribe of the Lohani, but also including many Ghilzais, Kharoti, and Nasars. To protect themselves, however, from possible attack, the Povindahs are organised in bands of hundreds and even thousands, strong enough to open the way with their swords should the tax offered to the local chiefs not be deemed sufficient. In summer these martial traders encamp on the Ghazni plateaux, descending in autumn towards the Indus through the Gomul, Gwhalari, or some other mountain pass, and

Fig. 14.—The Gomul Pass.

Scale 1 : 1.500.000.



30 Miles.

returning the following April. Some of the Lohani merchants trade regularly between Bokhara and Central India, indemnifying themselves for their innumerable risks and hardships by exorbitant charges for their wares. On crossing the Indus they leave wives, children, and aged in the Derajat camping-grounds, with the flocks and their arms, no longer needed in traversing British India. Little bannerets and pikes planted on the mounds by the wayside recall the memory of those that have perished *en route*. Their yearly exchanges with India alone are estimated at about £1,500,000. About 12,000 traders, with their convoys of camels, pass annually down the Gomul route, and many of the Povindahs now seek employment on the public works in India.

Towards the Baluch frontier various formerly independent and turbulent clans have recently been reduced or partly reconciled to the rule of the English, who here maintain the "scientific frontier" between Kandahar and Kwatah (Quettah). Thus the Pishins and Tari (Tarim) of the Khojah-Amran range have become vassals of the Indian Empire, and now derive their chief wealth from their dealings with the British encampments. Many of the inhabitants of these valleys, although pure Afghans, call themselves Seids (Sayads), claiming descent from the Arabs, and even from the Prophet. As horse-dealers they are known throughout India, and in their district Hindustani is current. The neighbouring Kakars, notwithstanding their evil repute for brigandage, are really amongst the most peaceful nomads in Afghanistan. At the approach of warlike expeditions they move away to other pastures, and give a hospitable reception to the Hindu, Povindah, and other traders, through whom they thus maintain their intercourse with the outer world. Their nomad Nasar neighbours, like the Banjari of India and European gipsies, have no fixed abodes, nor even any regular winter and summer camping-grounds.

Although forming the majority of the inhabitants, the Afghans often escape the notice of travellers, because they dwell mostly away from the towns on the lands inherited from their forefathers. The people met by strangers in Kabul, Ghazni, Kandahar, and Herat are chiefly the Tajiks, who are scattered throughout the whole of Afghanistan, except in the grazing districts. In most respects they resemble the Tajiks of Central Asia, and like them are descended from the old political masters of the land, variously intermingled with Turks, Uzbegs, Arabs, and other races. Both at Kabul and Bokhara they are known as Parsivan, that is, Parsi-zeban, "of Persian tongue," and the term "Sarte" is also applied to them in common with other settled communities. In Afghanistan they represent the industrial and commercial life of the nation, and in the towns they have kept alive a knowledge of letters, thereby preventing the Afghans from relapsing into utter barbarism. In the west some cultivate but few own the land, most of these peasants being subject to Afghan masters. The Kohistani of the Daman-i-Koh and valleys draining to the Panjhir may be regarded as forming a distinct class from the Tajiks, whom however they resemble in their intelligence and industry, though not in their peaceful habits.

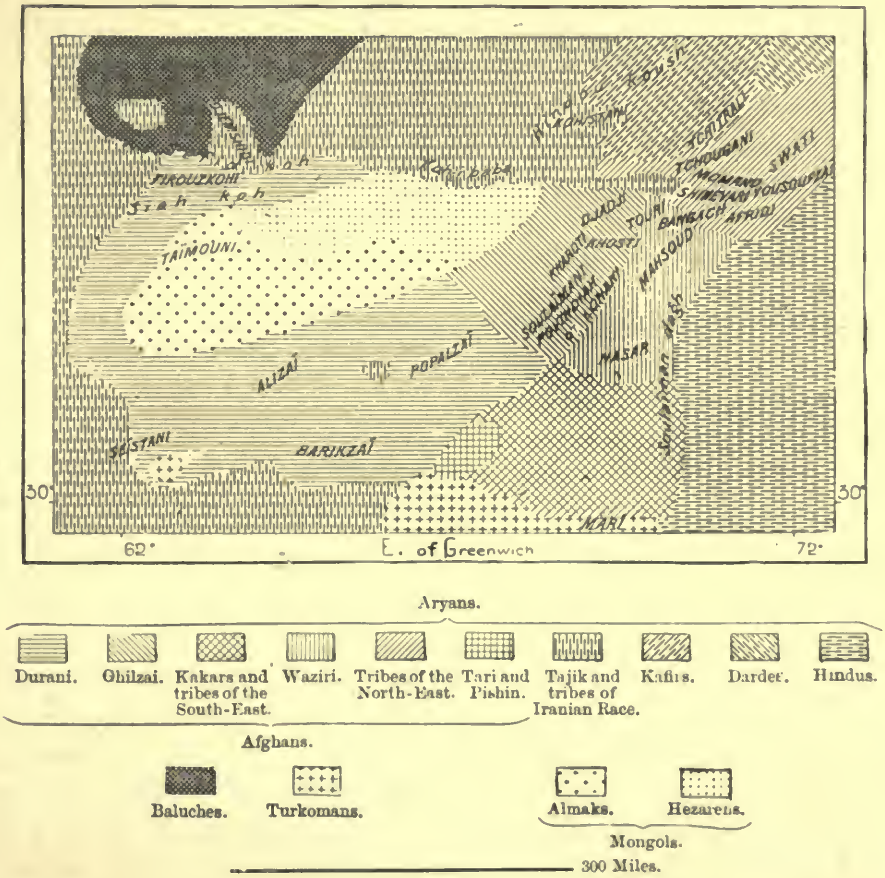
Next to the Tajiks the chief civic elements are the Hindki and Kizil-Bashes. The Hindki or Hindus are nearly all traders or money-lenders, and in their hands is soon swallowed up the produce of Afghan labour and plunder. The Kizil-Bashes, or "Red Heads," of Turkoman origin, came from Persia during the time of Nadir Shah, and have since kept aloof from the surrounding populations. Most of those settled especially at Kabul are attached to the court and higher functionaries as secretaries, inspectors, and employés of all sorts. Trained to servility towards their masters, and to truculence towards the masses, they have acquired the vices of their class, and are accused of insolence, ostentation, cruelty, and perfidy. The Red Heads of the Herat district, being engaged in trade and industry, are exempt from these charges.

The mountainous region north and east of Kohistan and west of the Swati

territory is inhabited by aborigines stigmatised as Kafirs, that is "infidels," because most of them have hitherto refused to embrace the Mohammedan faith, but more commonly known as "Siah-Posh," that is, "Black Clad," from the black goat-skins formerly worn by them. These Hindu-Kush tribes have succeeded in maintaining their independence, thanks to the inaccessible nature of the land, which is skirted west and south by the historic routes of Bactriana and Hindustan. The whole of the rugged uplands comprised between the Hindu-Kush, the Kabul River, and Indian frontier have a population of 500,000; but the Kafirs proper can

Fig. 15.—Populations of Afghanistan.

Scale 1 : 11,000,000.



scarcely number more than 150,000. But no modern explorers have hitherto penetrated far into the heart of the country. When Wood visited Badakshan in 1840 he met a few Kafirs, who invited him to visit their territory, which he would find flowing with wine and honey. But he was unable to accept the invitation, and a similar offer had again to be declined by Biddulph in 1878. Hence these tribes are known only through the few of them that have been seen beyond their own domain either as traders, shepherds, or slaves in Kabul. During the war of 1879 an excursion was made to the north of Jalalabad by Major Tanner, who

penetrated with a small escort into the Darah Nur district, and visited the Chugani villages of Aret and Shulut. But he brought back little further information regarding the Kafirs, whom Yule and Rawlinson suppose to be Aryan Hindus driven ages ago into the highland region by them called Wamastan. According to Trump, who has seen a few of them, the Siah-Posh differ in no respect from the northern Hindus, while other observers describe the Kafir as of all Asiatic types that which approaches nearest to the European. Fair hair and blue eyes are common enough, although brown or light chestnut hair and grey eyes predominate, while the complexion is not darker than that of the average European. Some have regarded them as perhaps descended from the Macedonians left in the mountains by Alexander; but before their relations with the English they had never heard of "Sikender," and most of them now call themselves the "brothers" of the English conquerors of India. More than one writer has suggested the policy of taking them as allies, raising a corps amongst their tribes, and building forts in their country, thereby outflanking the Afghans, and thus definitely ensuring British supremacy in Kabul. On the other hand, patriotic Russians have suggested that the "Black Clad" may just as likely be brothers of the Slavs as of the British, and have already begun to regard them as the future outpost of Russia on the road to India.

But the Kafirs themselves possess no political unity, being split up into eighteen hostile clans in a chronic state of intertribal warfare, suspended only during the harvest. They also come frequently into collision with their Mohammedan neighbours, who seek to take them alive, a Kafir slave being generally regarded as worth two of any other race. The Kafirs, on their part, give no quarter, for in their eyes no glory is comparable to that of a slayer of men, and those only can aspire to the dignity of *bahadur* or *surumnali* who have struck off four heads with their own hand. The woman whose husband has killed many Mussulmans decks her hair with cowries, or wears a red ribbon round her neck. The unhappy wretches who have had no chance of striking off a head or two are obliged to eat apart. Yet disputes rarely arise amongst members of the same clan, and when they come to blows the antagonists must strip for the fight, throw away their arms, and after the scuffle make it up in the presence of all the village.

A frequent cause of border warfare is the obligation of seeking a wife outside the clan, the members of which are all regarded as brothers and sisters. While the "infidels" are away wife-hunting, the Mohammedans penetrate into the district in order to buy or take by force victims destined for the harems of the chiefs, the Siah-Posh women being the "Circassians" of Afghanistan. A clan subject to the ruler of Chitral is obliged to send him a yearly tribute of honey and butter, woven goods, costly vases, and cattle, besides a number of young women and children of both sexes. In general these "brothers of the English" show very little respect for their women, on whom falls all the household and field labour, and who in many districts are yoked together with the oxen. In most of the tribes polygamy is permitted, forbidden in others, and altogether there are few countries where wars, slavery, religious influences, and interminglings have brought about a

greater variety of social usages. Amongst the Siah-Posh seen by Biddulph the conjugal tie is very lax, whereas elsewhere the mere suspicion of infidelity on the part of a young woman will set the whole village in uproar. The culpits are compelled, under pain of death, to acknowledge their guilt, their dwellings are burnt, and they themselves banished for ever. The very road they have taken to escape is held as polluted, and the elders of the community offer propitiatory sacrifices on the banks of the first stream crossed by the fugitives. Amongst the tribes of the interior property is as much respected as the family reputation. An object lost by a Kafir will remain for years on the spot where it fell, and even the assassin will scrupulously restore to their friends the property of his victims. Couriers also may fearlessly traverse the land, provided their letters are carried on the point of a wreathed stake.

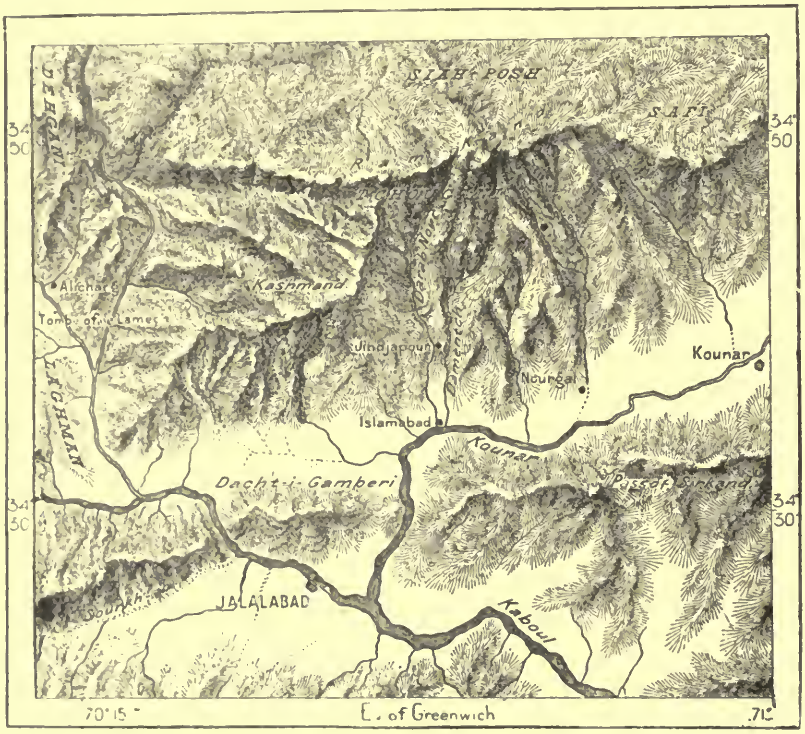
The dialects current amongst the various *gali* or tribes differ so much one from the other that the natives of remote districts are unable to converse together. All, however, belong to the common Aryan stock, and seem more nearly related to the Sanskrit than to any other branch. The native cults belong also to the group of Vedic religions. Some of the local deities, such as Imbra (Indra), recall those of the Hindu pantheon, while the sacrifices resemble the holocausts formerly celebrated on the banks of the "Seven Rivers." Like the Hindus, the Kafirs offer a vague worship to the Supreme Being, but their homage is addressed chiefly to countless divinities represented by stocks and stones, animals, or rudely-carved images, after the manner of the famous Vishnu at Jagganath. To these supplications are addressed for rain or fine weather, against sickness, famine, and war. Certain practices seem to have been borrowed from the Guebres. Thus fire is carefully kept alive and guarded from all impurities. The snake, in common with so many mythologies, is highly venerated, and regarded as the guardian of hidden treasures. To kill him would be sure to bring down some disaster on the land; but, on the other hand, a stranger daring to violate one of their sanctuaries would be instantly hurled from the nearest precipice.

The Siah-Posh recognise some of the neighbouring Mohammedan tribes as their kinsmen. They are aware that their territory was formerly far more extensive than at present, and that they have been gradually driven from the plains towards the perennial snows, thereby losing not only much wealth but also their civilisation, for "our forefathers," say they, "could read and write like the Hindu pundits." Amongst the surrounding Mussulmans many Kafir usages are still observed, as, for instance, the use of benches instead of squatting Turkish or Persian fashion on the ground, wine-drinking, and the vigesimal system of notation. The women of these Moslem tribes also go abroad unveiled, and take part in all outdoor occupations. Amongst these half-Afghanised peoples are the Safi, or "Pure," and the Chugani of the Darah Nur ("Valley of Noah") and lower Kunar River, who are often called Nimshah, that is, "Half and Half." They intermarry both with the Afghans and Kafirs, and generally endeavour to keep on good terms with all their neighbours. Through them the Chitrali carry on a considerable export trade in fine cattle, hounds, and sheep, thereby acquiring much

wealth, which they spend in building large many-storied houses embellished with elegant wood carvings, and in surrounding their villages with high and strong palisades.

Besides these pure Aryan "Black Clads," Afghanistan is also occupied by numerous people of Mongol stock. Such are the Hezareh (Hazarah), that is, the "Thousand," who hold the Koh-i-Baba and Siah-Koh valleys of the Upper Hilmend and Heri-rud basins. Being thus in possession of most of the highlands between Kabul and Herat, they compel armies and caravans to make a great detour southwards by Kandahar and Farah. In a straight line the distance from Kabul

Fig. 16.—Darah Nur.
Scale 1 : 750,000.



24 Miles.

to Herat is scarcely more than 360 miles, whereas the historic route followed at all times by trade and war is longer by fully one-half. The Hezareh, doubtless so called from their countless segmentations, are unquestionably of Mongol origin, as shown not only by the designation of Moghel applied to them by the Ghilzais, but also by their Kalmuck features, small oblique eyes, high cheek-bones, flat face, scanty beard, as well as by their own traditions and the unanimous testimony of Eastern writers. According to Akbar's historiographer, Abu 'l Fazil, they were sent in the thirteenth century by Mangu-Khan south of the Hindu-Kush, though it is difficult to understand how, without any apparent contact with the Persians, all

except a single tribe have exchanged their Tatar mother-tongue for a pure Iranian dialect, affected only by a few Turki words borrowed from their Turkoman neighbours. Rawlinson supposes that they were settled from the remotest times in the country, where they were brought into close relations with the Persians at the time when the civilising influences of Iran were most active. Numerous ruins of cities spoken of by the natives certainly imply a far higher culture than that now existing in this region.

Except those to the north of the western Sefid-Koh, scarcely any of the Hezareh tribes are nomads, all dwelling in permanent villages of small thatched houses half buried in the ground. But while taking to fixed abodes, they have preserved many of their Mongol usages, such as horseracing, at which they are scarcely less skilled than the Khalkas of the Gobi steppes. Although endowed with sufficient poetic genius to make their amatory declarations generally in extemporised verse, they are far inferior in culture to the Afghans and Tajiks, to whom their artless and uncouth ways are a constant source of ridicule. Nevertheless, by these neighbours they are also dreaded as sorcerers, capable by a single glance of burning up the liver in the bodies of their enemies. In their exuberant hospitality they have retained the old custom of accommodating the passing stranger with their women, who in other respects enjoy a large share of freedom. They manage the household and overlook field operations, and in time of war take part in the tribal councils, even joining in the fray on horseback. No family matters are transacted without the advice of the women, against whom the hand of man is never raised.

The national government is monarchical, the wealthiest tribe, which takes the title of Ser Khane ("Head of the House"), being considered by all the others as forming a privileged class. Each community obeys its own beg or sultan, who administers justice, imposes the fines, condemns to prison, and even to death. These kinglets are often at war among themselves; at other times forming temporary confederacies either to plunder a powerful neighbour or resist the tax-gatherers sent among them by the amir of Kabul. Thus the political map of the country is incessantly shifting with the vicissitudes of war, the interest or caprice of rulers. Towards the border lands the race has been considerably modified by crossings, and amongst the Hezarehs many are now met with Afghan features, while, on the other hand, some Ghilzais might be taken for Kalmuks. In recent times the Hezarehs have begun to migrate in large numbers to India, where they obtain employment on the public works. Thousands also have become enslaved to the surrounding Afghan communities.

The Hezarehs are all of the Shiah sect, whereas their Aimak neighbours and kinsmen are zealous Sunnites. Of these Aimaks, that is, "Hordes," several, especially in the Herat uplands, still speak Mongol dialects, and the chief tribe bears the strictly Mongol name of Kipchak. Their domain comprises the hilly pasture lands of the Ghur district south of the Hezarehs, the highland valleys encircling the Herat basin, and the northern slopes of the Parapomisus facing the Turkestan lowlands. The Taimuri, one of the Char Aimak, or "Four Hordes," have also settled west of Herat in Persian territory Most of the Aimaks still

dwell in the *urdu*, or tents, which are grouped irregularly round some defensive tower occupied by the chief, and which are made either of grey felt or black skins. The settled villages in their country are inhabited almost exclusively by Tajiks. Brave as the Hezarehs, and like them ruled by despotic chiefs, the Aimaks are even more dreaded on account of their ferocity. Elphinstone tells us how after the fight they quaff the blood of the slain; and according to Ferrier the girls of some tribes cannot wed until they have taken part with the men in some warlike expedition.

The Jemshidis, whose 5,000 families encamp under plaited reed tents in the upper Murgh-ab valley, are by some writers classed with the Aimaks, although their regular features and Persian speech leave little doubt as to their Aryan descent. But through incessant war and migrations, combined with camp life, they have acquired the manners and character of their Turkoman neighbours. Like them they are marauders, and lose no opportunity of falling on passing caravans. But these raids are not always successful, and since the beginning of the present century their numbers have been much reduced. In the neighbourhood of Herat dwell their kinsmen, the nomad Persian Firiz-Kui, removed hither by Tamerlane from the Firuz-Koh district at the southern foot of Demavend.

To this motley assembly of races and peoples at present inhabiting Afghan territory must be added a few Jewish and Armenian money-lenders; some Abyssinians, Kalmuks, Arabs, Lezzhians, and Kurds, slaves or adventurers fighting under the amir's flag; many Turkoman, Baluch, and Brahui nomads encamped on the frontiers, whence they make frequent raids into the interior. Thus all the peoples of Western Asia are represented in a land where so few Europeans have penetrated, except in the wake of the British invading hosts.

Topography.

In the south-eastern regions between the Hindu-Kush and Kabul River all the Kafirs, Dards, Afghans and other highlanders dwell in small towns or villages, usually situated in fertile alluvial valleys or on the slopes facing southwards and sheltered from the icy northern blasts. As in the Alps, the Hindu-Kush towns consist mostly of a number of hamlets relieved by no monuments except their turreted forts and religious edifices, often surrounded by extensive ruins. The Swat valley still contains one well-preserved structure of this sort, surmounted by an oval cupola 90 feet high and encircled by a series of niches in ten stories. The *Shankar-dar*, as this sanctuary is called, seems to recall the worship of Shankar, one of the Sanskrit names of Siva. Within their walled enclosures each of the fortified Swat villages of *Tarrnah* and *Chahil* contains about 1,000 families. In another formerly resided the venerable Akhund, who, though posessed of little political power, was supposed in Northern India to be an all-powerful prophet, a standing menace to British rule, capable at any moment of hurling against it tens of thousands of fanatical Wahabites. *Tall* and *Kalkot*, in the Upper Panjkora valley, have each a population of 1,500 families of Bushkars, a branch of the Dard nation. Lower down the same river stands *Miankalai*, capital of the petty Afghan state of Jundul.

In the Kunar River valley are the relatively important towns of *Mastuj*, picturesquely situated at an elevation of 7,600 feet, at the junction of the Yasin and Upper Oxus roads, and *Chitral* or *Chitlal*, capital of the most powerful state on the southern slope of the Hindu-Kush. Here resides the *mihtar* or *badshah*, who rules over some 200,000 Dard and Kafir tribes, some exempt from imposts, others compelled to supply slaves even of their own kindred. He is himself tributary to the maharaja of Kashmir, to whom he sends a yearly convoy of horses, hounds, and falcons. Further down are *Asmar*, *Shigar*, *Serai*, and *Kunar*, the last two governed by Afghan chiefs. Kunar gives its name to the lower course of the Chitral River, whose sands are here washed for gold.

The villages of Kafiristan are unknown even by name, while those of the upper Panjir and Ghorband valleys are insignificant hamlets. But within 12 miles of the confluence of the streams, and at the foot of the Paghman range, stands *Charikar*, probably occupying the site of *Alexandria*, which was here built by the Macedonian conqueror to guard the highland routes converging on the lowlands. The neighbouring plain takes the name of *Bagram*, supposed to be a corruption of *Vigrama*, that is, "chief town," a term long applied to the capital of the Daman-i-Koh district. The town, also traditionally known as *Shehr-Yunan*, or "Greek city," was still standing at the time of the Mongol invasion, and amidst its ruins Masson picked up about 60,000 Bactrian coins, rings, and other objects, nearly all in copper. South of Charikar the crest of a wooded hill is crowned by the picturesque town of *Istalif*, whose mild climate, sparkling streams, shady plantations, orchards, and gardens render it the pleasantest place in the whole of Afghanistan.

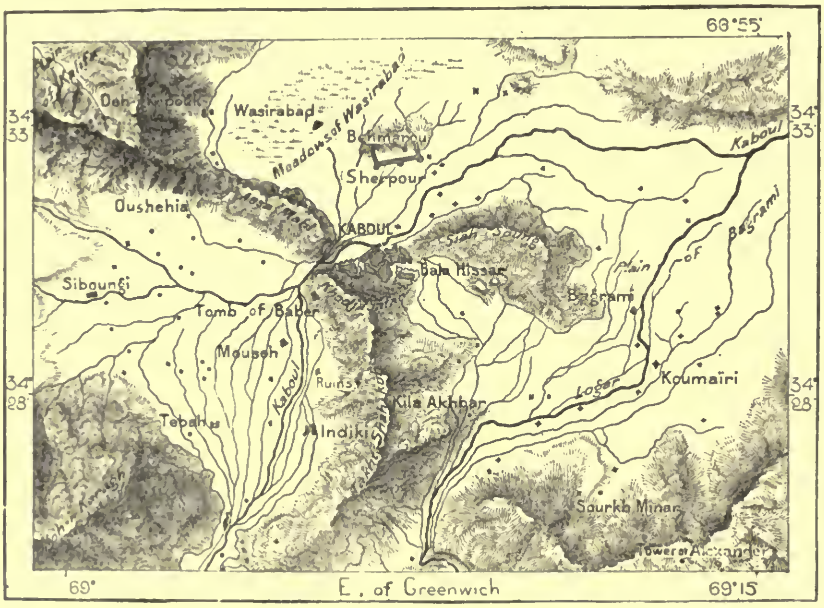
Kabul, present capital of the state, is the "oldest city of all," say the natives, and according to the local legend here fell the devil when he was cast out of heaven. The inhabitants also proudly point to the "tomb of Cain," thus carrying back to the beginning of the world the bloodstained annals of this turbulent region. In any case the city was certainly in existence at the time of the Macedonian expedition, and is mentioned by the old writers first under the name of *Ortospana*, or "White Camp,"* and afterwards by that of *Cabura* (Ptolemy). On the south-eastern road leading to India stand the remains of the Surkh-Minar ("Red Minaret), and of "Alexander's Pillar," structures betraying evidence of Greek or Græco-Bactrian style. At the end of the fifteenth century Baber, who knew no spot comparable to the "paradise of Kabul," made it the capital of his vast empire, and amid the gardens of the south-west is still seen the white marble enclosure, carved with arabesques and covered with inscriptions, which was raised to the memory of this emperor. Timur, son of Ahmed Shah, also chose Kabul as his residence, and since then the city has for over a century held its position as capital of the kingdom. But apart from its official importance, it occupies a site which could not fail to make it a great emporium of trade, for it stands on the historic route between India and Bactriana, in the midst of fertile plains offering every resource to caravans after their toilsome journeys across the snowy Hindu-

* Rawlinson, in "Jour. Geographical Soc.," 1843.

Kush. Thanks to its altitude of over 6,000 feet above the sea, it enjoys as temperate a climate as European cities lying 10 degrees farther north, and its fruits are famous throughout the East for their exquisite flavour.

Kabul covers a space of about 2 miles on the south bank of the river to which it gives its name, and which 10 miles lower down is more than doubled in volume by its junction with the Logar. West of the defiles just above the city there stretches a vast triangular basin of well-cultivated plains, shaded with poplars and willows, and encircled by bare rocky hills. Eastwards a projection is crowned with the military quarter of the Bala-Hissar, or "High Fortress," partially destroyed by the English in 1880. Within the enclosure stand the amir's palace and gardens, and the city itself is intersected in all directions

Fig. 17.—Kabul and Neighbourhood.
Scale 1 : 260,000.



6 Miles.

by walls, dividing it into distinct plots like the cells of a honeycomb. But these inner lines have in many places been demolished, and the breaches are connected by a whole labyrinth of narrow winding lanes, the intricacies of which were increased by the ruins of about 1,000 houses destroyed by the earthquake of 1874. Many of the inhabitants have since then withdrawn to the suburbs, which stretch north-west and north along both sides of the stream. In order to overawe the city, the English in 1880 occupied the heights of Sherpur (*Behmaru*), which rise on the north-east to an elevation of 800 feet, and which Shere Ali had already chosen as the site of fresh fortifications. Sherpur has the advantage over Bala-Hissar of standing isolated in the midst of the plains, and of not being commanded by any neighbouring hills. About 6 miles east of Bala-Hissar are the

ruins of an older city known by the name of *Bagam* or *Bagrami*, that is, "Capital," and Kabul itself seems to have formerly stood on the banks of the Logar.

On the route between Kabul and Peshawar the chief intermediate station is *Jalalabad*, which stands at a height of scarcely 1,800 feet below the gorges by which the Kabul River pierces the Siah-Koh range, and in the centre of the Nangnahar basin sheltered on all sides from the winds. Hence the heat is often oppressive at this threshold of the Iranian plateau; but the fertile plain is in many places shaded by leafy trees. In winter the population is greatly increased by the shepherds returning from the surrounding pasture-lands. Beyond this point the only place of any note is *Lalpura*, at the Afghan entrance of the Khaibar Pass, which is guarded at the other end by the British fortress of *Jamrud*.

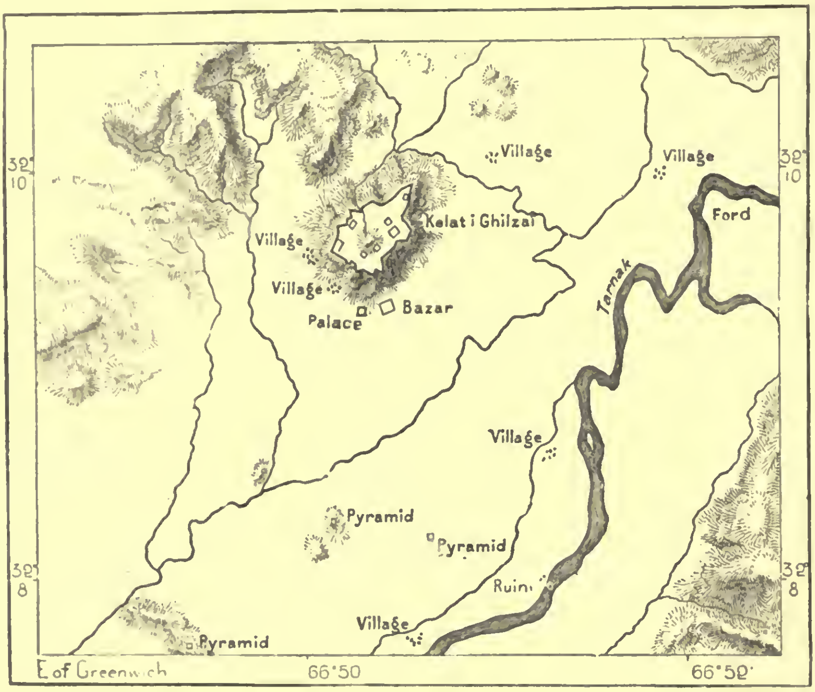
South of the Sefid-Koh most of the "towns" on the eastern slopes of the Sulaiman-dagh are mere aggregates of mud huts surrounded by walls of the same material. Such are *Kuram*, capital of the district of like name, and in the Tochi valley the old but decayed *Shehr* or *Sharh*, that is, "city" in a pre-eminent sense, which still exports a remarkably strong and hardy breed of horses. *Kaniguram* and *Makin*, farther north, are the chief centres of population in the Waziri territory.

West of the Sulaiman-dagh no towns are met till we reach *Ghazni*, the chief place on the military route between Kabul and Kandahar, and in the eleventh century capital of an empire stretching from the plains of Delhi to the shores of the Euxine. Yet the residence of Mahmud, the "Ghaznevide" conqueror of India, presents few of the advantages required by an imperial metropolis. Lying at an elevation of 7,800 feet above the sea, in a region exposed to fierce gales, sultry in summer, extremely cold in winter, Ghazni is also destitute of copious streams and fertile plains. "I have often asked myself," says Sultan Baber, "how the princes who reigned over Hindustan and Khorassan came to fix the seat of their government in such a wretched country." Hence it is not surprising that when it ceased to be a royal residence Ghazni soon lost most of its population, although still preserving its importance as a formidable stronghold between Kabul and Kandahar. It stands at the foot of a long gypsum ridge, with here and there patches of vegetation, and at its highest point crowned with a citadel, whose walls are flanked with bastions and towers. Like that of Kabul, this citadel, which was stormed by Lord Keane in the first Afghan war, takes also the name of Bala-Hissar. Although never a very large place, the ruins of old Ghazni stretch for a considerable distance to the north of the present city. Here doubtless stood Mahmud's "Heavenly Spouse," the marble and granite mosque built by him to commemorate his conquests. To this mosque belonged probably the two graceful minarets embellished with Kufic inscriptions now lying on an artificial platform in the district.

Ghazni takes the title of "Second Medina" from the great number of illustrious persons whose tombs it formerly contained. That of the Ghaznevide is still seen in the old town, but it has no longer the sandalwood gates brought hither by Mahmud from Somnath in Kattyawar, and by the British removed to Delhi in 1842. Doubts, however, have been entertained as to the identity or antiquity of these gates.

Ghazni is peopled by Hezarehs and Ghilzais; but *Kelat-i-Ghilzai*, that is, "Castle of the Ghilzais," the only other stronghold between Kabul and Kandahar, is inhabited almost exclusively by members of this tribe. It is rather a fortress than a town, its irregular lines, barracks and magazines crowning an isolated eminence on the stony plateau which separates the Argand-ab from the Tarnak valley. At its foot are scattered the villages of the peasantry, besides the palace, bazaar, and other buildings, which might form the nucleus of a city. Numerous ruins are strewn over the cultivated and well-watered plain, while the heights are crowned with the remains of tombs, forts, and signal towers, attesting the former

Fig. 18.—Kelat-i-Ghilzai.
Scale 1 : 45,000.



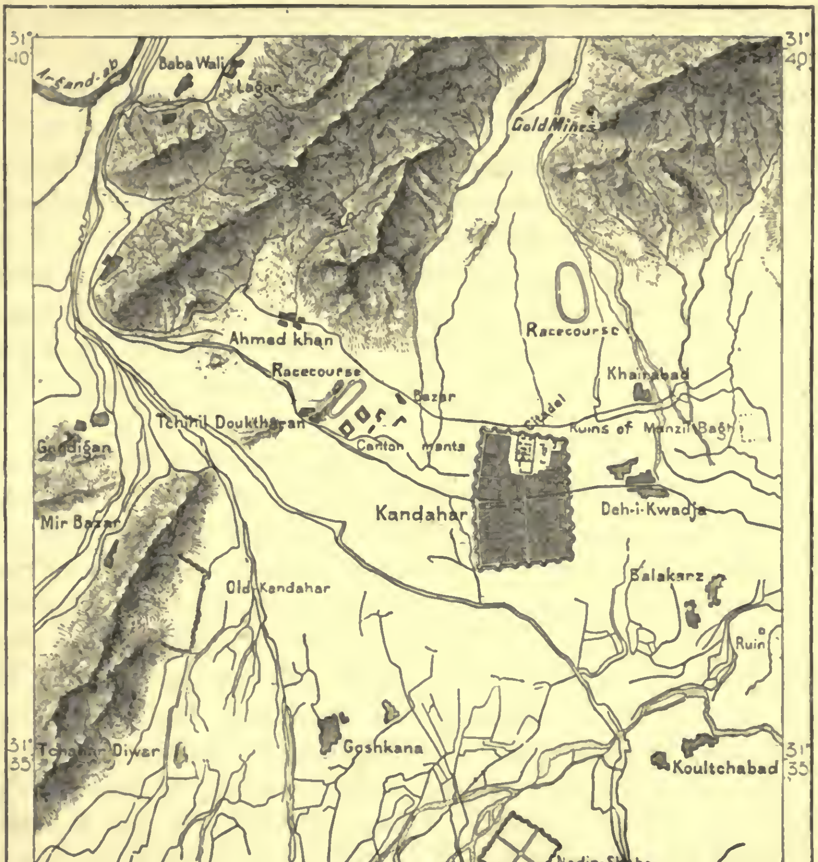
1,100 Yards.

strategic importance of Kelat-i-Ghilzai. During the late war it was the chief centre of General Roberts's operations on his famous march from Kabul to Kandahar.

Like so many Asiatic towns, *Kandahar* or *Khand*, a term identified by some etymologists with an ancient "Alexandria," by others with a still more ancient Hindu "Ghandara," has several times shifted its position. The city of *Arachosia* (in Sanskrit *Harakwati*) lay more to the south-east, where now stands the ruined station of *Olan Robat*, or *Shahr-i-Tohak*, in the midst of the Argand-ab solitudes. To this place succeeded "Old Kandahar," which has not yet completely disappeared. About 3 miles from the modern enclosure the hills are skirted by solid ramparts, the remains of a Bala-Hissar, which was formerly one of the strongest

places in Afghanistan, and which held out for eleven months against Nadir Shah. Another Kandahar, founded by Nadir himself, enjoyed a brief existence of a few years during the last century, and its well-preserved walls still stand at about 3 miles to the south of the present city, which was built by Ahmed Shah, founder of the present dynasty. He chose it as the royal residence, and the finest edifice within the walls is the domed mosque standing over his tomb, the resort of thousands

Fig. 19.—Kandahar.
Scale 1 : 100,000.



3,300 Yards.

of blue pigeons. No one better than the conqueror could appreciate the extreme strategic importance of Kandahar, the "key of India." Lying on the semicircular route between Kabul and Herat, commanding the outlet of the Argand-ab and Tarnak valleys, as well as the defiles of the ranges separating India from the Hilmend basin, it has the further advantage of being surrounded by a fertile region, which might supply abundant provisions to armies on the march. On the south and south-west it is unassailable, being protected in this direction by vast desert tracts.

The quadrilateral of Kandahar stands at a height of 3,500 feet above the sea on a plain sloping gently towards the south-east in the direction of the Tarnak River. The irrigating waters which supply the city, and which convert the surrounding district into a vast garden, are drawn from the Argand-ab, and skirt the foot of the advanced spurs of the Gul-Koh, which is here pierced by the profound Baba-Wali Pass. Here was fought the battle by which General Roberts raised the siege of Kandahar in 1880. The city walls, though flanked by over fifty towers, and supported northwards by a citadel, are in a bad state of repair; but the interior presents a favourable contrast with Kabul, its well-kept streets generally running at right angles, while the whole space within the enclosure is divided by two main avenues into four nearly equal quarters, approached from the north through the citadel, and on the other sides by three gateways. At the junction of the avenues stands the bazaar, surmounted by a fine cupola, and thronged with a busy crowd of buyers and sellers. The eastern section of the avenues leading to the Kabul gate is occupied chiefly by cloth merchants, while that leading west to the Herat gate is alive with the incessant din of workers in copper and blacksmiths. The dyers, potters, and fruit-vendors are grouped along the southern avenue terminating at the Shikarpur gate, and the road to the citadel is lined with large warehouses well stocked with English and Russian goods. The dealers in the bazaar belong to every race in Western Asia; but the great bulk of the inhabitants are members of the Durani tribe.

Recently Kandahar lay within the "scientific frontier" of the Indian Empire; but consequently upon a change of Government in England it was restored to the amir in 1882. Here was to have terminated the Shikarpur railway, first section of the transcontinental line between India and Asia Minor. But although the works have been temporarily suspended, the portion of the railway already completed from the Indus to Sibi, at the foot of the Bolan Pass, is continued up to the plateau by routes practicable for artillery, and the present military frontier station has been fixed at *Chaman*, within three days' march of Kandahar. From this encampment, which is flanked by spurs of the Khoja-Amran, the British forces guard the eastern extremity of the main military route traversing Afghanistan from the south-east to north-west. Any further advance could scarcely stop short of *Kushk-i-Nakud*, memorable for the defeat of General Burrows in 1880, or even of the fortress of *Ghirisk*, which commands the passage of the Hilmend and the Zamin-dawar valleys. The numerous ruined fortifications scattered about this spot attest the great importance attributed at all times to this strategic point. It might also be found necessary to secure *Farah*, a stronghold standing at the south-west angle of the northern highlands and of the great military highway near the fertile plains of Sistan. Then there is Sistan itself, whose chief stronghold, *Lash*, stands on an eminence surrounded by valleys, impregnable to any but the heaviest modern artillery. Nor could *Sibzawar* or *Sebzwar* be neglected. This fortress, which holds the Aimaks in check, and which has replaced the ancient Isfezar, is the last strategic point south of Herat, and prophets of ill-omen have already named it as the probable site of future collision between the great rivals for empire in Central

Asia. To the south-west the Tajik village of *Anardereh* stands near the Persian frontier, at the foot of a hill rent throughout its entire length by a cleft nowhere more than 20 inches wide, and caused, says the local legend, by a stroke of the sword of Ali.

Herat, which from its strategic importance has been called the "Gate of India," and from its vast agricultural and industrial resources the "Pearl of Khorassan," is one of the oldest, and at times has been one of the most populous, cities in the world. It is clearly identified with the *Aria* which was a large place in the days of Alexander, and which, according to the Persian historians, was in the twelfth century the "queen," and the "illustrious," containing 444,000 inhabited houses, 12,000 shops, 6,000 public baths and caravansaries. In the next century it was captured after a six months' siege by Jenghiz-Khan, who butchered its inhabitants to the number of 1,600,000, forty persons alone escaping the sword of the ruthless Mongols. Such is the vital importance of its position, that it has been fifty times attacked and levelled to the ground, each time again rising from its ruins. Lying on the Perso-Afghan frontier, it has never ceased to be a subject of contention between these conterminous states, and if, despite its geographical dependence on Persia, it now belongs to the Amir of Kabul, its Persian-speaking inhabitants have to thank England, which has twice interfered and compelled the Shah either to raise the siege or surrender the prize. At present the political equilibrium has changed. Russia has become the most powerful neighbour of Herat, and her engineers are surveying the ground with the view of making it the future terminus of their Trans-Caspian railway system. Lessar has recently shown that the Heri-rud forms the natural approach from the Turkestan depression to the Iranian plateau, and this route, already traversed more than once by Turkoman and Mongol, is henceforth open to the Russian.

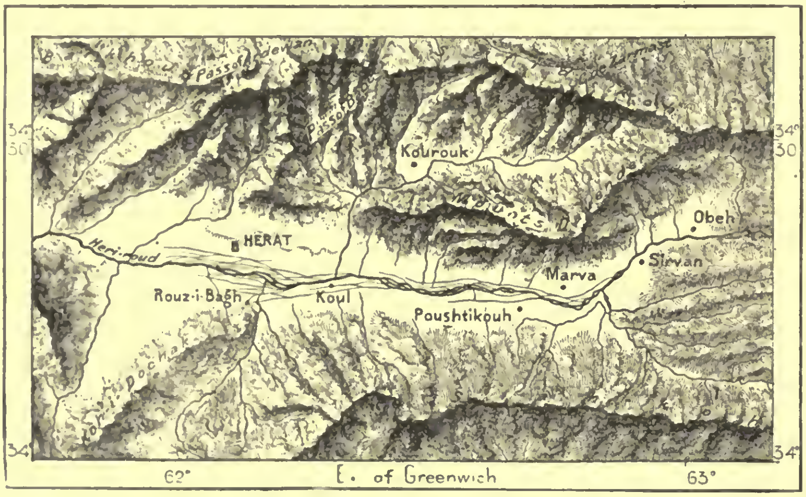
Situated about 2,600 feet above sea level, Herat occupies the centre of an extremely productive plain traversed east and west by the Heri-rud, and skirted on both sides by hills, which diminish in height towards the west. Amidst the clumps of conifers are here and there detected piles of ruins, tombs, and other remains, recalling the prosperous days when Herat covered an area ten times larger than at present, and when a dog "could bound from roof to roof all the way from the citadel to the villages on the plain." The enclosure of the modern city, forming a quadrilateral with its longest side running from east to west, is not so much a rampart in the strict sense of the word as a huge irregular mound, with a mean height of 80 feet, and separated by a deep ditch from the plain. On the north side stands the citadel of Ekhtiar-eddin, a solid structure commanded within 1,000 yards by an enormous eminence said to have been raised by Nadir-Shah. Like Kandahar, Herat is divided into four quarters by two transverse streets, whose point of intersection, till recently surmounted by a dome, has become the centre of the bazaar. The local craftsmen have retained their reputation for the manufacture of sword-blades, carpets and cotton goods; but at present the bazaar is chiefly stocked with English and Russian wares. The population, which varies enormously with the political vicissitudes of the country, was reduced to 7,000

in 1838, and when most of its Shiah inhabitants had quitted the city to escape the persecution of its Afghan masters. A considerable proportion of the citizens represent ancient families who have fallen with the place itself from their former greatness. Amongst them Ferrier met descendants of Jenghiz-Khan, Tamerlane, and Nadir-Shah.

Most of the palaces, caravansaries, mosques, and other public buildings form picturesque ruins in the suburbs, where a solitary tower, a broken arch, or a crumbling wall still covered with lovely enamelled porcelain blend their softened tints here and there with the foliage of the shady plantain. The district is noted for its healthy climate and balmy atmosphere, due to the northern breezes which prevail during the hot summer months. "Bring together the soil of Ispahan, the air of Herat, and the waters of the Kharezm, and there man will live for ever,"

Fig. 20.—Herat.

Scale 1 : 1,300,000.



30 Miles.

says an Iranian proverb. Nor need Herat envy the waters of the Kharezm itself, for those of the Heri-rud, "clear as a pearl," are amongst the purest in Asia; and, thanks to the nine main channels and their countless ramifications fed by the neighbouring river, Herat has become the "City of a hundred thousand Gardens." Here are grown seventeen varieties of the vine, and many species of melons, apricots, and other fruits, all renowned throughout Irania for their exquisite flavour. In these gardens the public help themselves, and pay the reckoning according to the difference of their weight on entering and leaving. Beyond the watered tracts the plains yield the *ink* or assafœtida of the Afghans, abhorrent to the European sense of smell, but which supplies a dainty dish to the Iranians.

Above Herat are a few groups of houses that may still be called towns. Such is *Kurukh*, capital of the Jemshidi territory, on the route to Maimeneh, noted for its hot springs, of which as many as eighteen bubble up within the town-walls.

In the Heri-rud valley west of Herat the ruined cities of *Ghurian* and *Kusan* owe all their importance to their position near the political frontier of Persia. According to Kanikov, Ghurian was in 1820 a larger place than Herat itself. Now it is little more than a picturesque fort, surrounded by hovels in the midst of a splendid district, where the neglected banks of the Heri-rud are fringed in many places by groves and even forests of large trees. Here the hare, partridge, pheasant, and grouse are met in vast multitudes, while larger animals, such as the deer, wild boar, and wild ass, frequent the surrounding thickets. Thus has nature again taken possession of this formerly populous and highly cultivated region of Afghan Khorassan. The same desolation has fallen on the hilly districts of the Hezarehs and Aimaks, which abound in the ruins of ancient cities, but where nothing is now seen except miserable hamlets. *Zerni*, or *Ghur*, capital of the country, has almost ceased to exist. Here Ferrier tells us he met a few Guebres, a statement which has been questioned by most subsequent writers.

Trade—Industries—Administration.

Owing to its sparse population, the conflicts of hostile tribes and races, the absence of large towns, roads and bridges, Afghanistan holds a low place even amongst Asiatic countries as an agricultural and industrial region. Certain valleys and a few oases on the plains are doubtless carefully cultivated, while the system of underground channels, dams, and irrigating rills bears evidence to the labour sustained for centuries by whole communities. In the agricultural districts also, where the land is parcelled out amongst small holders, independent of factors or middlemen, the soil is remarkably productive, and has frequently met the demands of invading hosts without being completely exhausted. But in ordinary times wheat, the staple national food, and the other products of the land, suffice only for the local demand, leaving little for export except some dried fruits, corn, and medicinal gums. Yet the temperate plateaux and cool upland valleys ought to yield abundant supplies to the Hindu populations, with whom scarcely any traffic is maintained. Nor do the industries of the Tajiks in Kabul and the other Afghan cities contribute much towards the export trade. Hence the Povindahs import from India and elsewhere far more than they are able to offer in exchange for the wares purchased by them from the English, Russians, Bokhariots, and Hindus. The Anglo-Indian Government, while withdrawing from Kabul and Kandahar, has at the same time suspended the works which were intended to connect those cities with the peninsular railway system, the two main lines towards the plateau terminating at present at the eastern entrance of the Khaibar and Bolan passes. Bridges, viaducts, cuttings, embankments, tunnels, everything was suddenly and senselessly abandoned after upwards of £520,000 had been expended on these indispensable works. But while the British lines have thus been interrupted by a Liberal Government, those of the Russians are steadily advancing in the opposite direction, from the Caspian, through the Turkoman oases, towards the Afghan frontier. And thus arises the question, which of the two

great powers, compelled by the very force of events to contend for supremacy in Central Asia, will be the first to secure by the locomotive the commercial possession of Afghanistan. The advantage must certainly lie with those who shall take the lead in placing the inhabitants of the plateau in easy communication with the rest of the world.

Afghanistan is not likely long to maintain any real political independence, to preserve which its inhabitants should possess a common patriotic sentiment and confidence in their destinies. But Afghan, Hezareh, Tajik, Kizil-bash, Kafir are all so many antagonistic elements, while the many tribes of the ruling race itself lack all political cohesion. Most former wars possessed little more than a special interest for the different clans, whose chiefs were struggling from time to time for the foremost rank. The Ghilzais, Kafirs, Waziris, Yusuf-zais, Lohani, do not regard themselves as the subjects of the amir or of his great Barakzai chiefs. They supply provisions, guides, and convoys to the stranger without feeling that they thereby incur the charge of treason; their only fatherland is the tract held by their respective clans. And as regards the central Government itself, all the inhabitants of the country have for the last half-century grown up under the idea that the real sovereignty lies ultimately with the English or the Russians. European travellers in the country are incessantly besieged with questions touching the rivalry of the two great conquering powers and the probable issue of the pending conflict. Such also is the universal topic of discussion in the bazaars, where the news-messengers play the same part as the political press elsewhere.

The Afghans themselves seem generally inclined to believe in the future supremacy of Russia. "However disagreeable the confession, there can be no doubt," says MacGregor, "that in their eyes the prestige lies with the Russians, whom they regard as the next conquerors of India." Doubtless they have not yet obtained a footing in Afghanistan, but all their expeditions in Central Asia invariably end in conquest, which is never followed by retreat. The English, on their part, have thrice invaded Afghanistan, but at what a price? and with what results? In 1842, after three years' occupation, the Anglo-Indian garrisons, some 13,000 strong, perished almost to a man in their attempt to withdraw from Kabul. Three persons alone escaped from the greatest disaster ever suffered by the British army. In the last war also the serious defeat of Kushk-i-Nakud had to be repaired; and although on this occasion they quitted the country of their own accord, the popular report, rapidly spread from tribe to tribe, represented them as fugitives. Their attitude fully justifies the saying attributed to Ahmed Shah in speaking of his Afghan kingdom, "Beware of my bee-hives; the bees are there, but not the honey." To avoid diplomatic difficulties, and for other motives of "high state policy," the British Government not only sacrifices blood, treasure, and prestige by withdrawing when it might easily remain, but seldom even allows its own subjects to explore the country in times of peace. Even in the far west, on the route between Farah and Herat, caravansaries are met at intervals, formerly erected by the English, but which they dare not now make use of. In 1840 their advanced posts stood to the north of the Bamian Pass,

THE AMIR SHER ALI, PRINCE ABDALLAH YAN, AND DURANI CHIEFS.

whence the Russian van might now be visible, and their guns obstruct the bed of the torrents flowing down to the Oxus. Unless wiser counsels are adopted, the Afghan view of the situation cannot fail to be realised.

The present amir, former guest of the Russians, now a British pensioner, represents in his person the political state of the land for which the two rival powers are contending. His kingdom is far more extensive than seems consistent with his real weakness, for its limits have been arbitrarily laid down by the two protecting states. North of the Hindu-Kush, Koh-i-Baba, and Siah-Koh, the highlands and plains stretching to the Oxus belong geographically rather to Russian Turkestan than to Afghanistan proper, to which they are politically attached. On the southern frontier also many tribes pay the taxes only on compulsion, while the three rival cities of Kabul, Kandahar, and Herat themselves form part of one state only in virtue of an "Asiatic equilibrium" temporarily guaranteed by the two paramount powers in Central Asia.

Like other Eastern sovereigns, the amir is in theory an autocrat; but practically his power is limited not only by the *Shariat*, or "way of the faithful," that is, by the religious and civil traditions of Islam, but also even more decidedly by the privileges of the sirdars and republican tribes. At once absolute master of the Tajiks, head of the Durani, and suzerain of the other tribes, he commands, advises, or solicits according to the respective attitudes of these sections of the community. Certain offices are hereditary in many families, and these could be interfered with only at the risk of a general insurrection. A large number of clans receive neither his magistrates nor his tax-gatherers, but administer their own affairs, tax themselves, and send to the amir the amount of tribute settled by custom. Thus limited, the royal power is transmitted if not from father to son in the order of primogeniture, at least in the same family. Formerly the sovereign was elected by the sirdars or great chiefs; now the English Government exercises the right of nomination as well as that of control by the presence of an official resident at the Court of Kabul. But for motives of prudence this dangerous office is entrusted to a native.

When he ruled over the Peshawar district and all the eastern Daman-i-Koh between the Indus and the Sulaiman-dagh, the amir was a wealthy potentate, with a revenue exceeding £2,000,000. In those days the plains supplied him with money, the plateau with men. But now that all his resources are derived from the latter, his yearly income has fallen to little more than £600,000. Hence the Court has been compelled to economise, more especially since the ordinary revenue has been absorbed almost entirely by the army. Although most of the troops are raised amongst tribes bound to military service in lieu of tribute, and although provisions are mostly supplied gratuitously in the garrison towns, large sums are still spent, especially in the purchase of war materials. In 1879, at the time of the rupture with England, the amir had in his arsenals 379 guns and 50,000 rifles procured in English workshops or manufactured in the country. The troops are drilled in English, chiefly by deserters from the British army.

The various provinces are administered by a *Lankim* and commanded by a

military sirdar. But both functions are frequently exercised by the same official, especially if he be a member of the Durani tribe. In the nomad districts his principal duty is to collect the taxes and settle disputes, the Kazi, who accompanies him, delivering judgments and fixing the fines.

The Afghan provinces proper, determined mainly by the relief of the land, are comprised in the subjoined table:—

I. KABUL—
  Kabul, Upper Kabul, and Logar River valleys, Daman-i-Koh.
  Ghorband, Upper Ghorband, and Panjir valleys.
  Laghman, Kabul riverain tracts between the capital and Jalalabad.
  Safi and Tagao, Hindu-Kush valleys between the Daman-i-Koh and Kafiristan.
  Jalalabad, Lower Kabul River valley.
  Ghazni, Ghazni River basin, and surrounding hills.

II. KANDAHAR—
  Kandahar, eastern Durani territory.
  Kelat-i-Ghilzai, Tarnak valley, Gul-Koh.
  Ghirisk.
  Farah, Farah-rud basin.

III. SISTAN—
  Lash, Shakansur.

IV. HERAT—
  Herat, Middle Heri-rud basin.
  Karrukh, Upper Heri-rud basin, Obeh.
  Ghurian, Lower Heri-rud.
  Sibzawar, Ardrashkan basin.
  Shahband, Aimak territory.

V. HEZAREH TERRITORY.

VI. KAFIRISTAN—
  Mastuj, Kaskar or Chitral, Kunar, Bushkar.
  Panjkora (Jundul), Dir, Bajaur.

NOTE.—Attached to Afghanistan are also the khanates of Turkestan south of the Oxus, although geographically comprised within the region of which the Russian city of Tashkend has become the political centre. These are the states of Wakhan, Badakshan, Kunduz, Balkh, Andkhoi, Shibirkan, Ak-Cha, Saripul, Meimeneh, Gurzivan, Darzab, for which see Vol. VI.

CHAPTER III.

BALUCHISTAN.

THE land of the Baluches has scarcely retained a shadow of political independence, and is now practically a province of the Indian Empire. Kachi-Gandava, its most fertile and relatively most populous division, belongs geographically to the region of the plains, and here the English have long maintained military cantonments. Kwatah (Quetta) also, the chief stronghold on the plateau, is held by a British garrison, commanding on one hand the Afghan city of Kandahar, on the other the Baluch capital of Kalat. In Kalat itself the advice of the English resident, representing the Indian viceroy, is always followed by the sovereign. Along the coast the small seaports, peopled mainly by sailors and traders, subject to the direct jurisdiction of England, are veritable Hindu colonies; while the telegraph stations on the same seaboard are guarded by troops in the pay of the Calcutta Government.

Several English officers, notably Colonel MacGregor, have been sent to survey the roadsteads along the coast and the strategic routes leading inland to the Afghan plateaux. Nevertheless, much of the land still remains to be explored, consisting, however, chiefly of bleak highlands, sandy wastes, rocky or saline argillaceous tracts. Thus the region, mostly a wilderness, covering a space of about 30,000 square miles, and stretching from the Hilmend southwards to the Washati or Koh-i-Sabz and Sianeh-Koh ranges, is regarded as a worthless and ownerless land. While Hughes assigns it to the Afghan amir as being naturally included in the Hamun basin, on most maps it is represented as belonging to the Khan of Kalat. The official map prepared in 1872 by Goldsmid on the banks of the Hilmend marks the common frontier of Persia, Afghanistan, and Baluchistan at the Koh-Malak-i-Siah, or "Mountain of the Black King," west of the Hamun, and from this point the Baluch border is traced directly to the great bend of the Hilmend below Rudbar. This would give an area of over 100,000 square miles to Baluchistan; yet, according to the most liberal estimates, this vast region has scarcely the population of a second-rate town. Even including the province of

Kachi-Gandava, which belongs ethnically and geographically to India, the whole state contains less than 500,000 inhabitants.

The Baluchistan Highlands.

The khanate attains its greatest altitude towards the south-east frontier of Afghanistan, where it probably culminates in the double-crested Takatu, north of Kwatah, and where other peaks in the Chihil-Tan range appear to rise nearly as high. A few points in the Koh-i-Muran, or "Snake Mountains," which lie more to the south between Mastang and Kalat, are also said by Cook to rival the Takatu,

Fig. 21.—Routes of the chief Explorers of Baluchistan.
Scale 1 : 9,000,000.

Railways Completed. ------ Projected.
240 Miles.

all these, as well as the Kalipat peak north of the projected line of railway, attaining an elevation of 12,000 feet or thereabouts. All the Brahui ranges, which form the eastern scarp of the plateau above the Kachi-Gandava plain, run in remarkably regular parallel lines in the direction from north-north-east to south-south-west. Carved into terraces of unequal size, shaped like pyramids, or bristling with sharp peaks, these rugged limestone hills are mostly destitute of vegetation, a few juniper forests alone blending their pale green with the blue and rosy tints of the rocks bathed in the light of the sun. According to the hours of the day with their shifting lights and shades, the hills appear on the horizon like a scarcely visible pink or violet veil, a transparent luminous vapour, or glowing

cones of molten red lava. Between the parallel chains, the basins formerly filled with lacustrine waters have all been emptied by their mountain emissaries. Yet some of these sequestered dells, with their grassy swards and clumps of trees, remotely resemble fresh Alpine valleys; while others are like fragments of the desert enclosed in an amphitheatre of hills. Such is the Dasht-i-Bedaulat, or "Desolate Plain," separated from Kwatah by the Madar or "Dead Man range," which is traversed by the main route from India through the Bolan Pass. This dismal waste is exposed in winter to tremendous snowstorms, in summer to the still more dreaded whirlwinds, driving the hot sand in eddies across the plain, and often swallowing up the belated wayfarer.

Like most limestone systems, the parallel Brahui chains are broken at intervals by deep transverse fissures, through which the perennial or intermittent torrents rush from terrace to terrace, down to the plains. Many of these gorges present a series of zigzag lines, disposed at sharp angles with almost geometrical symmetry. Till recently they formed the only route from the plain to the plateau, although practicable only in the dry season, or when the water was low enough to leave a footing on either side. As many as eleven roads of this sort, some not yet explored by Europeans, connect the Kalat uplands with Kachi-Gandava. Of these the easiest is that of Milon or Mula, which rises gradually from the Gandava oasis to the Jalawan tableland. But, owing to the great length, it has at all times been less frequented than the famous Bolan Pass, which runs from the northern extremity of Kachi-Gandava up to the Dasht-i-Bedaulat, and which the British engineers have converted into a fine carriage road, accessible to artillery. But the Bolan itself has now been abandoned by most travellers, who generally proceed by the new line of railway from Shikarpur to Sibi, at the foot of the hill, and thence follow the Harnai valley to Kwatah.

The loftiest section of the Brahui highlands is occupied by Kalat, capital of the khanate. As shown by the course of the streams radiating in all directions from this water-parting, the traveller must descend from the plateau of Kalat, whatever route he may take. Kalat stands at an altitude of 6,800 feet, which is rivalled by but few crests in the highlands stretching south of the Brahui hills. The parallel chains, which begin beyond the Mula Pass, and run nearly due north and south, form a well-marked natural limit between the Baluch uplands and the plains of Sind, thanks, however, to their arid character rather than to their absolute elevation. These Khirtar or Hala Mountains in fact scarcely rise more than a few hundred feet above the plateau stretching westwards. One peak alone appears to exceed 7,000 feet above the sea, while most of the crests attain an altitude of little more than 5,000 or 6,000 feet.

West of the Khirtar range the Baluch plateau falls gradually towards the Arabian Sea. Here a spur from the Kalat highlands projecting southwards forms the water-parting between the Meshkid basin and the region draining southwards to the sea. This southern plateau is broken into three main sections of parallel chains running chiefly east and west and increasing in altitude landwards. Thus we ascend from the southernmost section, which is scarcely 200 feet above the sea, to

a central terrace 2,000 feet high, and thence to a third attaining an elevation of 4,000 feet. Most of the intervening ranges are pierced by ravines or broad openings, so that the whole country is intersected in all directions by natural routes accessible to caravans.

Parallel with the inland ranges runs the Baluch seaboard, better known by the name of Mekran, which has been cut by the action of the waves into numerous steep headlands from 300 to 400 feet high, following in uniform succession and separated from each other by sandy bays with regularly curved beaches. Thus the peninsulas of Gwadar and Omara projecting seawards between

Fig. 22.—Passes in North Baluchistan.

Scale 1 : 900,000.

Railways Completed. Projected.

30 Miles.

semicircular inlets of smooth water present an analogous appearance to the promontory of Giens and other headlands, connected only by a few sandy strips with the mainland. But the whole coast of Mekran seems to have been considerably upheaved since the formation of these promontories, for they stand at present at a much higher level than the intermediate strands.

Notwithstanding its numerous inlets, the Baluch seaboard nowhere offers any convenient havens for large vessels. The water shoals everywhere so gradually that men-of-war are unable to approach nearer than 2 or 3 miles of the coast, where no landing could be attempted during the prevalence of the south-west

monsoon, from March to September. But when depths of 140 or 150 feet are reached, the plummet often sinks abruptly 400 or 500 fathoms into the abyss of the Indian Ocean.

Like the islands of Ramri and Cheduba in British Burma, the Mekran coast presents abundant traces of igneous action, betrayed by numerous thermal waters and as many as eighteen mud volcanoes, forming in many places prominent features in the landscape. In the province of Las, bordering on India, seven of these cones, running close to the shore, are regarded by the Hindus as so many fragments of the goddess Durga, and from the bubbling mud of these volcanoes the devout pilgrims cast their horoscopes. Near the Por or Puri River, west of the port of

Fig. 23.—East Mekran Seaboard.
Scale 1 : 1,150,000.

Somniani, another rises in the middle of the plain to the height of 400 feet, terminating with a crater 460 feet in circumference. This is the Raj Ram Chander, or Chander Kups, which, like all the others, ejects mud and salt water.

River Systems.

Baluchistan is one of the most arid regions in Asia, notwithstanding its exposure to the south-west monsoons, which discharge much of their moisture especially at the north-east corner of the plateau, where the land attains its greatest elevation. Here there is a considerable rain during the summer months.

when some of the closed basins, as well as the valleys confined between the parallel ranges, are occasionally converted into temporary lakes. But the trade-winds reaching the Mekran seaboard have already lost much of their moisture in their passage across the South Arabian deserts. Hence the Hindu peasantry in the Baluch oasis have been obliged, like those of the other part of Irania, to construct karezes, or underground conduits in some of the most fertile valleys. But the Baluch natives, being unable to keep these channels in repair, depend for their supplies altogether on the waters of the *nudi*, or intermittent streams. Yet from its general appearance the land seems to have formerly been much more copiously irrigated. Traces of inundations, and even of permanent flooded basins, are visible in valleys which are now completely destitute of water, and wells sunk near the shore prove that there is still a large supply below the surface.

The Baluch rivers falling into the Arabian Sea flow mostly in narrow beds direct to the coast, and even in the rainy districts send down but little water. The Dasht, or "River of the Plain," which reaches the sea close to the Persian frontier, has a larger volume than the other coast streams, because in its upper course it follows one of the depressions between the parallel coast ranges, thus developing a basin of considerable extent. Yet for half the year it fails to reach the sea, and at this period the bar at its mouth remains exposed. The most copious river in Baluchistan is the Meshkid, most of whose headstreams rise in the Persian district of Sarhad, and flow first south-east in the direction of the Arabian Sea. But on entering Baluchistan they converge in a common channel south of the Sianeh-Koh, and thence flow east to the Rakshan, which drains the Panjgur district. The united stream then trends northwards through the gorges separating the Sianeh-Koh from the Koh-i-Sabz, beyond which it takes a north-westerly course to the closed basin, where it runs out in the swamps and sands. But this basin never sends its overflow farther north to the great depression of Sistan, as still represented on many modern maps. The *Hamun*, or marsh, to which the Meshkid sends its waters in the rainy season, occupies the central position of the Charan desert between the 28° and 29° north latitude, and from MacGregor's recent exploration it appears that this Hamun is completely cut off from that of Sistan by a lofty range of hills. During the floods it forms an extensive freshwater basin, but at other times it becomes a shallow reservoir of saline or brackish water. Parts of the surrounding plain are naturally fertile, although little cultivated, but the surface is elsewhere covered with a saline efflorescence several inches thick, which yields an abundant supply of salt to the surrounding districts. West of the Hamun-el-Mashkid the natives report the existence of the Kindi or Talah, another swamp, which receives the northern drainage of the basin. In north-east Baluchistan also the Lora, or river of Sharawak, flows to a third hamun in the middle of the desert.

According to MacGregor the Kharan desert is much more accessible than many of the sandy wastes in Persia, Arabia, and Africa. It is well known to the caravans, which can always rely after a day's march at least on a well of brackish water and a little fodder for the camels. But there are certain districts

carefully avoided by travellers, who would inevitably perish if overtaken by the terrible "simoon," a hot pestilential wind before which the dunes drive like ocean billows. At times also the air, although perfectly still, is filled with suffocating clouds of dust, a phenomenon attributed by the natives to the action of the solar rays on the fine particles of sand. Towards the east Pottinger traversed for five days a region of dunes with a mean height of 15 to 20 feet, all moving west and east, under the influence of the prevailing winds, and consisting of a fine reddish dust. Camels coming from the Meshkid across the sea of sands glide on their knees gently down the slopes facing eastwards. North of the Meshkid Hamun, MacGregor saw a large number of dunes of a different character, all moving north and south, some rising 60 feet above the plain and developing perfectly regular crescents, capacious enough to embrace a whole regiment between their two horns. Towards the Afghan frontier the sands take mainly a north-easterly direction, so that the various forms and disposition of these dunes, like those of the Thar desert in India, may perhaps be to some extent caused by the various oscillations of the ground.

Owing to the relief of the land, tne climate of Baluchistan presents within a relatively limited extent the most surprising contrasts. In the argillaceous and rocky basins of the coast streams, as well as on the Kachi-Gandava plain at the foot of the Brahui Hills, many districts are popularly compared to the lower regions; while on the bleak plateaux, at elevations of 6,000 feet and upwards, the traveller is exposed to keen northern blasts, and often runs the risk of being swallowed up in the winter snows. A similar contrast is naturally presented by the vegetation, which, however, is everywhere characterised by the almost total absence of forest growths. The slopes are sometimes clothed with various species of the juniper, and with the happuer (*ziziphus jujuba*), which yields a useful building-timber. In the valleys the hamlets are surrounded by a few mulberries, tamarinds, or plantains, while the brooks are fringed with willows. Most of the fruit-trees indigenous to West Asia, such as the peach, apricot, pear, apple, plum, pomegranate, almond, walnut, fig, and vine, besides the mango and date, flourish in the more favoured districts. In the hot lands the most common plant is the pish (*chamærops ritchiana*), a species of dwarf palm, whose trailing roots spread out 15 or 16 feet along the ground. To the Baluch it is as serviceable as is the bamboo to the Hindu, supplying him with food, and materials for cordage, tinder, sandals, and excellent matting.

At corresponding altitudes the Baluch fauna, which was little known before the exploration of St. John, differs in no respect from those of the Afghan plateaux, of the Hilmend depression and plains of India. But the lion, now so rare even in India, has disappeared altogether, while the leopard is very common. The hyena, wolf, wild boar, and a species of black bear that lives on roots, are also met. Gazelles frequent the skirt of the desert, and herds of wild asses are able to pass the whole day in solitudes entirely destitute of water and vegetation. Peculiar to Baluchistan are the *nectarinia*, a beautiful bird resplendent in all the colours of the rainbow, and the *urosmastix* lizard, which at a distance looks like a rabbit, and to

which the Persians give the name of "goat-sucker," believing that he bleats like a kid in order to attract and milk the she-goat. The Mekran coast teems with fish, and St. John derives this name from the Arabic *Mohi-Khoran*, that is, "Fish-eaters." The inhabitants of this seaboard certainly deserve this title of *ichthyophagi* already given to them by the Greeks of Alexander's expedition.

Inhabitants.—Baluches—Brahuis.

The Baluches, whose name is applied to the khanate of Kalat as well as to the whole of south-east Persia, are not the dominant people of the country. The race, in fact, seems to be most numerously represented beyond the khanate—in Persia, in the Indian province of Sind, and in Rajastan, to which the Baluches emigrate in large numbers from their bleak and barren highlands. They are usually grouped with the Aryan stock, and are regarded as closely related to the Persians, being descended from the natives converted to Islam at the time of the Abassides. Some, however, do not appear to belong to this stock, and, to judge from their features, the tribes on the Afghan frontier have much Mongol blood, being often indistinguishable from the Kirghiz nomads. Unanimous tradition traces other Baluches, as well as some Brahuis, to Syria and Arabia, from which they are supposed to have migrated either about the time of the Prophet or much later. Several Arab tribes of the Damascus and Aleppo districts are said to bear the same name as some of the Baluch clans in Mekran and Kachi-Gandava, whom they also greatly resemble in appearance. Except on the plateaux, nearly all are of a deep brown complexion, with high brows, long face, piercing glance, abundant hair and beard. But notwithstanding these and other traits, including a decided taste for brigandage, which they have in common with the Bedouin, all speak a language akin to modern Persian, but the pronunciation of which differs greatly from that of the polished Iranians. Religious expressions are borrowed from the Arabic, and those of trade and the industries from the Hindu dialects.

With the exception of a few hostile Shiah tribes on the Persian frontier, all the Baluches are Mohammedans of the Sunni sect. Like the Afghans, they are divided into a large number of khels, which occasionally change both name and residence. Hence the tribal nomenclature differs with almost every writer, although the great natural divisions correspond mainly with the geographical areas. The Baluches of the uplands are collectively known as Nharui, and those of the Kachi-Gandava lowlands as Rinds, and Maghsi or Moghasi. The latter, however, have become so intermingled with foreign elements that they may be regarded as forming a distinct ethnical group, now speaking Jatki, a Sind dialect current amongst the Jat peasantry. Much diversity also prevails in their dwellings, some tribes living in ghedans, or black felt tents, others in huts, and even in a kind of mud forts.

In several parts of the plateau many tribes form an intermediate link between the Baluch and Brahui races, the latter of whom are found in the purest state in the central provinces of Sarawan and Jhalawan. According to Masson, these Brahuis penetrated from the west, as apparently indicated by their name of

Barohi-i, which has been interpreted, "Arrivals from the West." Yet their central position on the plateau would seem to imply that they are the true aborigines, or at least the oldest inhabitants of this section of the Iranian tableland. They are probably the descendants of the Gedrosians met here by Alexander, and their national speech, although affected by numerous Persian and some Pushtu and Hindu elements, would seem to be fundamentally connected rather with the Dravidian family of the Dekkan, and more particularly with the Gond group of the Central Indian highlands. Judging from their language, which, however, possesses no written monument, the Brahuis would therefore appear to be a detached fragment of the old Dravidian people who, before the arrival of the Aryans, occupied the whole of India and a portion of Irania, and who, by some ethnologists, have been affiliated to the Uralo-Altaic stock. Broken into separate groups by the intruding Aryans, they may have thus remained for ages isolated from each other in the Baluch and Vindhyan highlands.

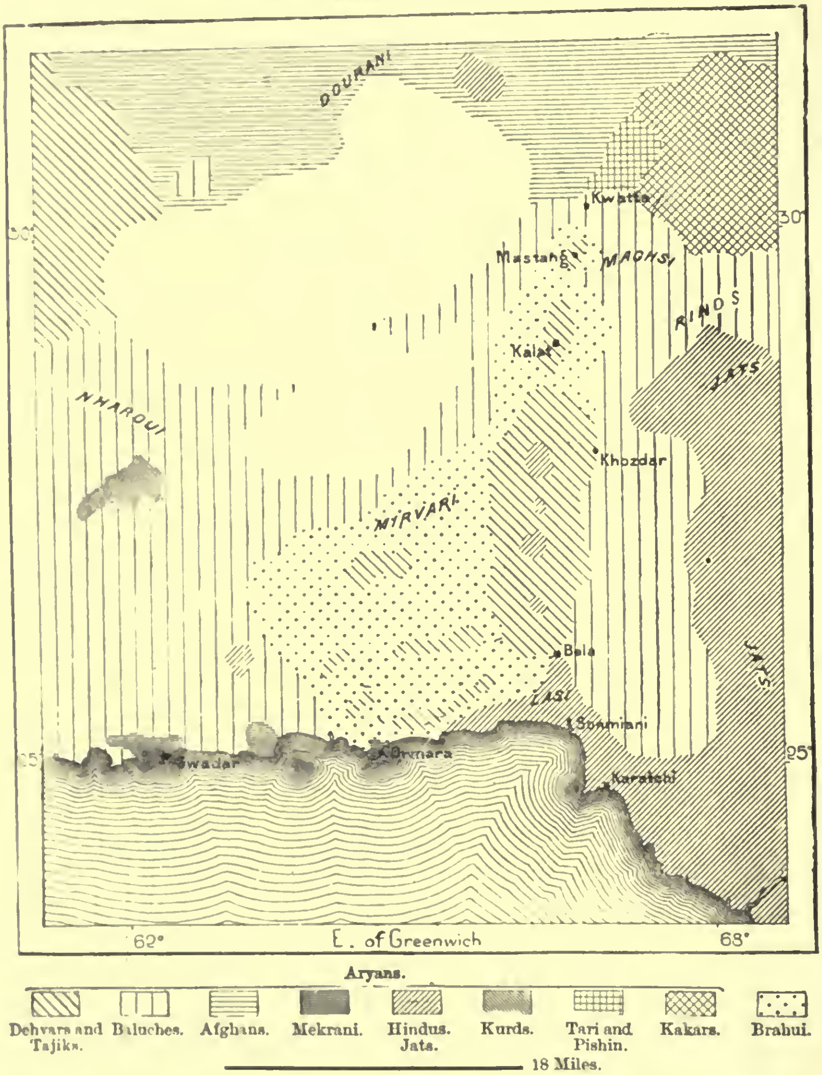
This assumption of the philologists is to some extent justified by the physical appearance of the Brahuis, who differ greatly from the Persians and Arabs, and whose features are much flatter and rounder than those of the Baluches, with more thick-set frames, larger bones, and shorter figures. They are also of much darker colour, and amongst them persons of fair complexion are never found, as amongst the Baluches. While no less hospitable than the other inhabitants of the plateau, they are more truthful, less cruel, revengeful, and avaricious. At the same time they are very industrious, and seldom interrupt their ordinary pursuits to engage in tribal warfare, readily allowing themselves to be persuaded by their women to peacefully settle their differences. The women themselves are much respected, and the death of one of them in a local feud would be regarded by both sides as a public calamity. Some freedom is also allowed to the youth of both sexes in the choice of their partners for life, and in this matter a simple promise on the part of either family interested is regarded as permanently binding. Even should the young man die before the marriage, his place is immediately taken by a younger brother. In the Brahui country *chedas* or mounds are erected over the graves of the dead by the wayside, and *chaps*, or rings of stones, commemorate the marriages and other important events among the nomad tribes.

As in Afghanistan and Turkestan, the great majority of the inhabitants of the towns and villages are Tajiks, here commonly known as Dehvars or Dekhans, that is, "Peasants." They speak Persian, and in physique differ in no respect from their kindred elsewhere. They are a peaceful, industrious people, who have had much to endure from the conquering races, and who ask for nothing except to be allowed tranquilly to pursue their industrial and agricultural occupations. The Tajiks have maintained the purity of their blood in most provinces, alliances with the women of the intruding tribes being interdicted by custom. Near the coast, and especially in the province of Las, bordering on Sind, the industries and cultivation of the land are chiefly in the hands of the Numri or Lumri, akin to the Jats of Hindustan. Like the Baluches, the Numri are divided into a great number of khels, caused by differences of pursuits and locality, but all evidently belonging to

the same ethnical stock, and speaking dialects of the same Jatki language. They hold an intermediate position between the Iranians and Hindus, betraying even in their religious observances some remarkable transitions between the two races. Thus by some tribes Mohammed is venerated as the tenth incarnation of Vishnu, while others combine Brahmanical rites with the precepts of the Koran. In the

Fig. 24.—INHABITANTS OF BALUCHISTAN.

Scale 1 : 7,800,000.



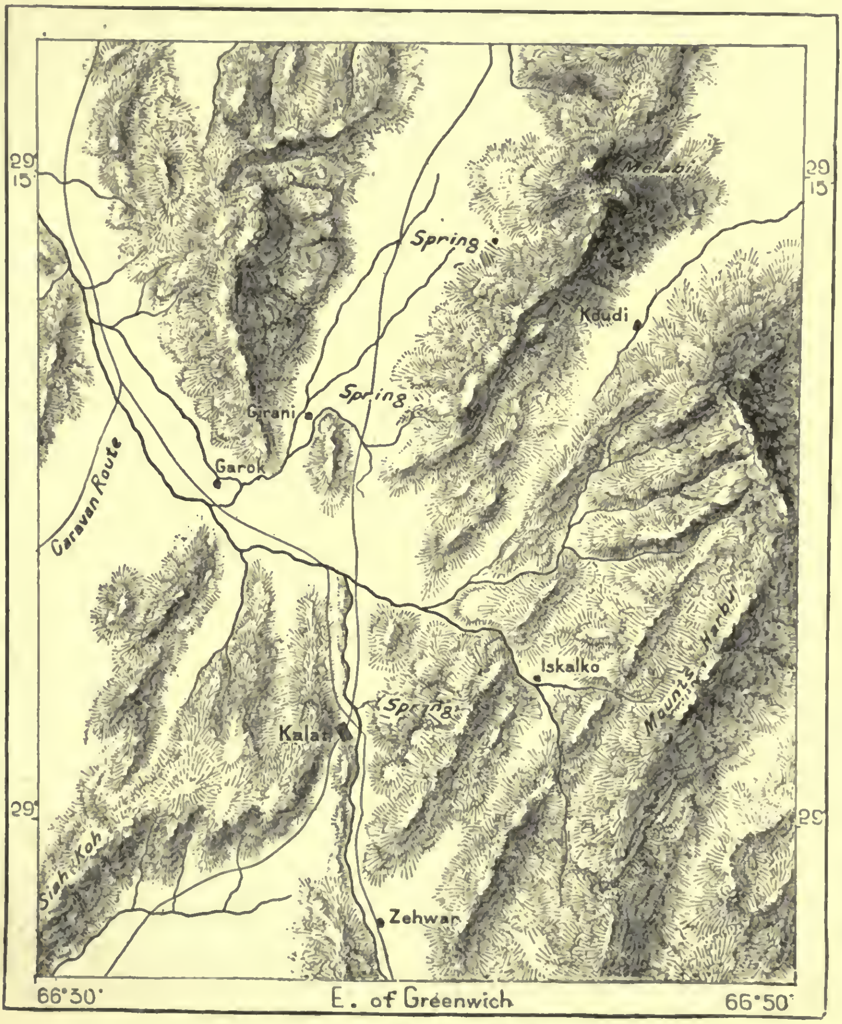
large towns a considerable portion of the inhabitants also belong to the Hindu race properly so called, and nearly the whole trade of the country is in the hands of the Baniahs from Gujarat and Bombay, or of the Multani, Shikarpuri, and Marwari merchants from Sind and Rajputana.

Other ethnical elements in Baluchistan are the Kakar and Tari Afghan tribes on the north-east frontier, some Arab communities on the Mekran coast, a few

Kurdish adventurers from West Irania, and some Negro or Mulatto slaves imported from Mascat. Here are also the Luri nomads, who speak a peculiar language, and who differ in no respect from the gipsies of the Danube in Europe. They roam about as strolling minstrels with their dancing bears and monkeys, and every tribe has its "king," besides its fortune-tellers, who know all the secrets of the magic art, and predict the future by chiromancy, by the combination of numerals, and

Fig. 25.—Kalat and Neighbourhood.

Scale 1 : 340,000.



6 Miles.

the disposition of the figures formed by the sand on vibrating plates. By means of these practices the Luri are said to frequently insinuate themselves into the household in order to rob or kidnap the children; for these Baluch nomads, like their European brethren, are popularly accused of all manner of crimes and malignant influences.

The English, who are the paramount race, are represented by a mere handful of

officials and others in the territory of their vassal, the Khan of Kalat. But their subjects of other races, especially Hindus, are numerous in all the trading centres.

Topography—Administration.

Several of the Baluch provinces are inhabited exclusively by nomads, and in these districts the so-called "towns" are mere groups of tents. Towns and villages

Fig. 26.—General View of Kalat.

with fixed residences are found only in the eastern and southern divisions. The Afghan frontier is guarded by *Kwatah* (*Quetta, Kot, Shal, Shal-kot*), the chief British stronghold, which lies on the route leading from Shikarpur to Kandahar, and which is garrisoned by a detachment from the Anglo-Indian army. It stands in a basin, which belonged formerly to Afghanistan, and which is at present scarcely 18 miles from the stream forming the official frontier of Baluchistan. Here converge the two routes from India, through the Bolan and Chapar Passes, as

well as those running north from the capital of the khanate, and over the Khojak Pass south from Kandahar. Some old towers still standing here and there at the entrance of the gorges attest the importance attached at all times to this strategic position on the threshold of Afghanistan, Baluchistan, and India. Under the shelter of the *Kot* or *Kwatah*, that is, "Citadel," a considerable town of about 1,000 houses has sprung up, inhabited chiefly by Afghans, Brahuis, and Hindus. Lying 5,600 feet above the sea level, in the midst of extensive grassy plains, and enjoying a temperate climate, corresponding to that of Western Europe, Kwatah offers special advantages as a British health resort and military cantonment. *Mastang*, the chief station on the road to Kalat, to these advantages adds that of a very fertile and well-watered district, yielding excellent grapes and other produce in abundance.

Kalat, that is, the "Castle," has become the largest place in Baluchistan since its selection as the seat of government. Its position at the highest point of the plateau enables it to command all the routes to India, to the coast, to Afghanistan, and Persia. But Kalat lies at the extremity of a rocky mountain range, where it is exposed to the full fury of the northern gales. Here the ground remains covered with snow for two months in the year, and corn ripens later than in the British Isles, although standing 25 degrees nearer to the equator. The surrounding gardens are watered by a copious stream of pure water, which rises near the royal necropolis on a plain draining north-westwards to the Lora River of Pishin. In the neighbourhood are the shapeless ruins of three other considerable towns, which bear witness to the great importance attached from the remotest times to this region of the plateau.

South-east of Kalat begins another river valley, whose waters drain through the Mula gorge towards the Indus, but are not copious enough to reach that stream. In the neighbourhood of some ruins near the head of the valley the face of the rock bears an inscription in Greek. The modern town of *Zehr* or *Zehri*, encircled by mud enclosures, and built, like Kalat, of half-baked bricks, gives its name to one of the side valleys of the Mula and to the Brahui tribe inhabiting it. This is the chief place met by travellers on the route to India. At the issue of the gorge, where the waters of the torrent are distributed in irrigating rills over the surrounding gardens, lies *Gandava*, which has acquired some importance both as the capital of the province of Kachi-Gandava, as a British military cantonment, and as the winter residence of the khan. Formerly the most populous place on the plain was *Bagh*, or "the Garden," which lies north-east of Gandava in an oasis of palms on the western verge of the desert. Bagh enjoyed a monopoly of the sulphur mines situated in the neighbouring hills not far from the town of *Choram*. North of the plain are *Dadur* and *Sibi*, the present terminal stations of the railway from the Indus to the Afghan plateau.

Through this railway Kalat and the whole of Baluchistan already enjoy direct communication with the coast at Karachi. The shorter route from Kalat to Sonmiani has been abandoned owing to the great scarcity of water along the road. Throughout the whole descent of about 330 miles there are only six springs copious enough to supply the caravans without being exhausted. *Khozdar*, one of these

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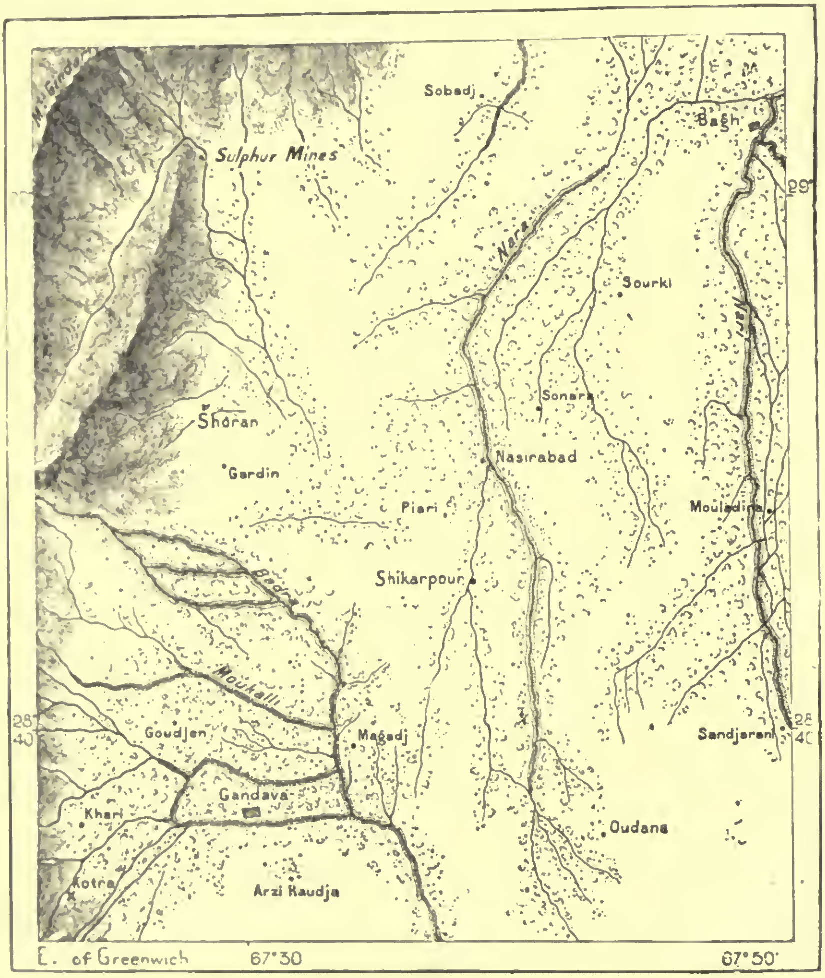
stations, with a small British garrison commanding the Mula Pass, lies at an altitude of 4,000 feet, in the midst of gardens and palm-groves. But the antimony and lead mines near *Sekran*, farther to the west, are no longer worked. Vast ruins, heaps of rubbish, and the remains of towers known as *ghar-bastas*, or "palaces of the infidel," show that the district must have been formerly much better watered, as it certainly was far more densely peopled than at present. One of these ruined

Fig. 27.—Kachi-Gandava Oasis.

Scale 1 : 440,000.



12 Miles.

cities, to the north-west of *Bela*, still preserves its ancient name of *Shehr-i-Rogan*. It crowns the summit of a conglomerate cliff, at whose foot flows an affluent of the Purali, the Arabis of the Greek navigators.

Sonmiani, the seaport of the province of Las, and at one time of the whole of East Baluchistan, has been completely eclipsed by Karachi, which enjoys the decided advantage of lying nearer to the Indus delta. Possessing no artificial

shelter, the harbour of Sonmiani, with a depth of about 16 feet, is exposed to the full fury of the south-west monsoon. It is also badly supplied with water from wells, which, although sunk in the sands above the level of the tide, soon become brackish. This part of the khanate is connected with India both commercially and by the origin and religion of a large number of its inhabitants. On a mountain near the river Aghor or Hinghol, in the west of the province, stands the famous temple of *Hinglaj*, still frequented by thousands of Hindu pilgrims. Here animals are sacrificed to the goddess Kali, and the devotees never fail to visit the islet of *Ashtola*, or *Satadip*, between the ports of Ormara and Pasni, whose rugged crest is crowned by a highly-venerated sanctuary. Ashtola was the "Enchanted Island" of Nearchus.

The seaports of *Sonmiani*, with its two harbours, and *Pasni*, with its telegraph station, are mere groups of huts built of matting suspended on poles. But *Gwadar*, capital of Baluch Mekran, is regarded by the neighbouring half-savage tribes as quite a magnificent city, famous far and wide for its sumptuous edifices. It occupies a picturesque position on the strip of sand connecting a rocky islet with the fantastic Mehdi Hills, where its mat houses are grouped round a square fort of somewhat imposing appearance. The chief industry of Gwadar is fishing, in which hundreds of small craft are employed, besides some thirty larger vessels engaged in the export trade to Mascat, Karachi, Bombay, and Malabar. The British mail-steamers touch twice a month at this place, which thus enjoys direct communication with the civilised world. Its chief imports are cotton and other woven goods, timber, rice, sugar, taken in exchange for wool, raw cotton, butter, dates from the interior, besides large quantities of salt fish and sharks' fins for the Chinese market. On the flank of the hill overlooking Gwadar are the remains of a vast reservoir constructed by the Portuguese.

Kej is often mentioned as the chief town of Baluch Mekran; but no such place exists, Kej really consisting of a group of oases, each with its separate village. Such "towns," as *Tamp*, *Mand*, *Nigor*, *Sami*, *Dasht*, *Parom*, and *Panjur*, are also mere collections of hamlets scattered over the oases. The gardens of Panjur, watered by underground galleries (karez) attributed to supernatural agency, yield as many as seventeen varieties of dates.

The khan belongs to the Kambarani branch of the Brahuis, who claim Arab descent, and refuse to intermarry with the other tribes. Residing alternately at Kalat and Gandava, the khan enjoys a nominal authority over a vast territory; but he is really one of the least powerful of all the vassals of the Indian Empire, and he is so poor that his chief source of revenue is the pension granted him by his protectors. According to the treaty of 1841 he binds himself to be always guided by the counsels of the British Resident at his court, to allow English garrisons in every suitable town in Baluchistan, to lend his assistance whenever called upon, and lastly to accept the annual subsidy, which constitutes him a simple functionary of the paramount State. Since then diplomatic relations have been disturbed, but on the other hand good services have been rewarded, and the subsidy advanced from £5,000 to £10,000. The alliance with England has also helped to consolidate

the authority of the khan over the feudal chiefs, whose claims to independent rights are completely ignored by the British Government. The khan alone is recognised, made responsible for the general tranquillity, and when necessary assisted in his efforts to reduce unruly tribes and restless chiefs. Next to the khan the foremost state dignitaries are always the two great Brahui sardars of Jhalawan and Sarawan. The hereditary vizier belongs to the Dehvar or Tajik section of the community, which, by the regular payment of the taxes, contributes almost exclusively to the support of the State. In Mekran most of the local tribes are practically independent of the central power, and the Port of Gwadar, pledged to the Sultan of Mascat, is governed by one of his officers. The khan disposes of an armed force of about 3,000 men, while the yearly revenue scarcely amounts to £40,000.

Excluding the desert wastes and the districts claimed by Persia, the political divisions of Baluchistan proper are as under:—

Provinces.	Chief Towns.	Chief Districts.
Shal	Kwatah	
Kalat	Kalat	
Kachi-Gandava	Gandava	
Sarawan	Sarawan	Sarawan, Nushki, Kharan, Mushki.
Jhalawan	Khozdar	Khozdar, Sohrab, Wadd, Kolwah.
Las	Bela	
Mekran	Gwadar	Mekran, Dasht, Kej, Panjur.

CHAPTER IV.

PERSIA.

THE term Persia, or Farsistan, is at present locally applied only to a small province in the kingdom. The natives still call their country by the old name of Iran, which, however, is also used geographically to designate the whole region of plateaux comprised between the Euphrates and Indus basins. From the historic standpoint, Iran has even a wider application in contrast with the term Turan, in this sense embracing all the cultured peoples of more or less pure Iranian blood scattered over the plateau and the Turkestan lowlands, where they form the fixed agricultural and industrial element in the midst of the half-savage nomad intruders from the north. In the historic evolution of Hither Asia, Iran thus represents the traditions of labour and intellectual culture; it recalls a long succession of powerful nations engaged from age to age in an incessant struggle with countless barbarous hordes. Conscious and proud of their antiquity as a polished race, the Persians look scornfully on the surrounding populations, less cultured or more recently reclaimed from barbarism than themselves. Whatever progress even the Western peoples may have made in science, art, and the industries, they none the less consider themselves as vastly superior in hereditary nobility to these later arrivals on the scene. It must in any case be allowed that Iran has played no slight part in the common work of humanity. In order to trace their languages to their source, the peoples of Aryan speech turn necessarily to the plateau where flourished the Zend and other Persian tongues, at all times the pre-eminently cultured idioms for the surrounding populations. Even in our days Afghans and Baluches alike affect the Persian speech when desirous of courting the esteem of their audience. Even in India Persian letters long struggled for the supremacy with Sanskrit and neo-Sanskritic tongues; and Hindustani, so widely diffused throughout the peninsula, is still overcharged with Persian elements introduced by the Iranian conquerors.

In the religious evolution of the West Asiatic and European peoples, a paramount influence was also exercised by the land of Zoroaster. In the sacred writings of the ancient Persians the conflict between the two principles is set forth

with the greatest fulness, and from them the later beliefs have borrowed their degrading teachings on the everlasting struggle between "good" and "evil," surrounded by their respective hosts of angels and demons. During the first developments of Christianity the action of Persia is betrayed in the rise of numerous Gnostic sects, the indelible trace of whose theories still tinges the doctrines of modern Christendom. The cult known specially by the name of "Persian" has now scarcely any adherents in the country itself, and flourishing communities of "Parsis" survive only in India. But while embracing Islam, the Iranians imparted a fresh form to the conquering religion. They became Shiahs, thus breaking the unity of Mohammedanism, which elsewhere, in Turkey, Arabia, Afghanistan, India, Turkestan, is almost exclusively Sunnite. Since the birth of the Shiah sect, the movement of religious life has continued in Persia, and contemporary European pantheism is associated more closely than is generally supposed with the Asiatic ideas of the universal godhead, which have nowhere found more fervent interpreters than among the Persian poets. Every philosophic concept, every fresh dogma, finds in Persia eloquent champions or zealous apostles. Iran has thus ever been one of the chief centres of inspiration for the religious world.

Yet a land which has played such a prominent part in the history of Asia and the West represents numerically but a small fraction of humanity. Even including Turks, Kurds, Baluches, and Arabs, the whole population of Iran cannot exceed ten millions. The estimates usually made by travellers and the best-informed local functionaries range from seven to eight millions; that is, five times less than France absolutely, and fifteen times less relatively to the respective areas of the two countries. Although various writers speak of fifty millions in the empire of Darius, Iran seems not even in the most flourishing times to have been very densely peopled. Much of the country is a complete desert, where the sands, hard marl, and saline tracts, although formerly less extensive than at present, encroached in one direction on the arable lands, which were on the other hemmed in by the rocky scarps of the highlands. It was from the conquered peoples of the surrounding plains that the Persian monarchs mainly drew those prodigious armies of several hundred thousand men with which they overran Scythia, Egypt, Asia Minor, Thrace, and Northern Hellas. But however weak they may have been in point of numbers, the ancient Persians still enjoyed all the advantages ensured to them by the geographical position of the land.

Historically the Iranian plateau forms a region of transition for the various races moving westwards. Here the Asiatic continent is, by the Caspian Sea and Persian Gulf, limited north and south to a space scarcely 400 miles wide. This narrow isthmus is further reduced by the low-lying and unhealthy coast-lands and almost inaccessible highlands to a tract not more than 300 miles wide really available for the movements of migrating peoples between the two great sections of the continent. The unknown Scythian steppes north of the Hyrcanian Sea served only as camping-grounds for barbarous nomads cut off from all intercourse with civilised peoples. Hence history properly so called could find a fitting scene

nowhere beyond the narrow plateau comprised between the Elburz and Susiana Mountains. Here was the natural meeting-place of peoples of diverse speech, cultures, and religions; here consequently were developed the new ideas inspired by the contact and intermingling of these conflicting elements. Throughout the historic period peoples of "Turanian" origin have at all times found themselves in juxtaposition with the Aryan races on the Iranian plateau. These two great Central Asiatic stocks were here represented formerly by the Medes and Persians, who in modern times have been respectively succeeded by the Turki and Farsi ethnical groups. Thus have been perpetuated in this region open warfare, internecine strife, provincial and local rivalries, and this very incessant conflict has doubtless largely contributed to the Iranian doctrine of the eternal struggle between the two principles of good and evil. But all these hostile elements, while bequeathing to each successive generation an inheritance of endless discord, have at least intermingled their blood and genius, as is well attested by their history, religions, and literature. In this Iranian laboratory the migrating tribes thus became rapidly modified, and issued forth endowed with a new intellectual life, some descending the Euphrates valley to Syria and Egypt, some through Asia Minor and across the intervening waters to Southern Europe, or else through the various "gates" of the Caucasus into the northern plains of Sarmatia. Persia in this way became the great centre of dispersion along the three main historic highways diverging towards North Africa, South Europe, and the regions draining to the Baltic and German Ocean.

Formerly almost unassailable in the centre of the vast continental political systems, Persia has long ceased to enjoy the advantages of this geographical position. The Arabian Sea, which had hitherto guarded the approaches from the south, now on the contrary invites foreign aggression. On the north the Caspian waters, no longer stretching away to unknown solitudes, are girdled round by military highways and chains of Slavonic settlements, while the ports and routes of the opposite shores are connected by regular lines of steamers. Thus Persia, which 2,000 years ago enjoyed perfect immunity from attack on her northern and southern flanks, is now exposed in these directions to the encroachments of the two great Asiatic powers whose capitals are seated on the Thames and Neva. Between these rivals for supremacy, the political independence of Iran has become little more than nominal. The Russians, who had temporarily seized the west Caspian seaboard so early as 1725, have since 1828 wrested from Persia all her Trans-Caucasian provinces, and by a recent treaty the hitherto undetermined frontier towards Turkestan has been modified to their advantage. The island of Ashuradeh, held by them at the south-east corner of the Caspian, is an advanced military post whence the Cossacks might in a few days present themselves before the residence of the Shah.

And if the Caspian has become a Russian, the Persian Gulf has become an "English" lake, where the practical supremacy of the British consuls is never challenged. The headland of Jask, at the entrance of the Gulf, is even already occupied by a Sepoy garrison, while a simple naval demonstration would suffice at

once to deprive the Persian Government of all its maritime customs. In recent years the "King of kings" has been fain, at the pleasure of England, to renounce his designs on Herat, and to allow a "rectification" of his frontiers in Sistan. In the interior British and Russian officers are alike received as masters. They are permitted quietly to survey the land, prepare charts, collect for strategic purposes all needful information, which is kept mostly sealed up in the military archives of the two empires. Although Persia has been frequently visited since the days of Marco Polo, and although the travels of Jonas Hanway, Thevenot, and Chardin

Fig. 28.—Routes of the Chief Explorers of Persia since Marco Polo.

Scale 1 : 18,000,000

300 Miles.

during the last century may still be read with interest, still by far the most important cartographic documents are those drawn up by the English and Russian surveyors at the request of their respective Governments. The Turco-Persian frontier in Kurdistan has been determined exclusively in accordance with the surveys of the two generals Williams and Chirikov.

Without precise natural limits toward the east, where the plateau and mountain ranges merge imperceptibly in those of Afghanistan and Baluchistan, Persia presents on its three other sides well-defined geographical frontiers. Here the plateau is everywhere enclosed by barriers of lofty ranges, separating it on the north from

the Caspian and Turkestan depressions, westwards from the Mesopotamian plains, elsewhere from the Persian Gulf and Sea of Oman. Within these outer ramparts the surface is largely covered with extensive sandy, argillaceous, or saline waters depressed towards the centre. Hence the population has been concentrated chiefly on the outskirts, in the north, west, and south-west, in the valleys supplying sufficient water for irrigating purposes. The inhabitants thus nowhere present a compact mass, but are distributed in two distinct columns converging between the Caspian and Upper Tigris valley in the province of Aderbeijan.

The North-Eastern Highlands.

Notwithstanding the intermediate flooded cavity of the Caspian, the north-eastern scarp towards Turkestan really forms the regular continuation of the Caucasus. The existence of a connecting axis between the two systems is clearly indicated by the Apsheron peninsula, by the submarine banks and islets terminating at the Krasnovodsk headland, lastly by the two ridges of the Great and Little Balkan, running directly to the "Turkoman Caucasus," which under the divers names of the Kuran-dagh, Kopet-dagh, Gulistan Hills, and Kara-dagh, stretch south-eastwards to the Heri-rud valley. Beyond this point the mountains, which take first an easterly then a north-easterly direction, belong to the Parapomisus system. Thanks to the explorations of the Russian surveyors commissioned to lay down the new frontier, the whole of this region of the Turkoman Caucasus has begun to be better known in its topographical details. The large chart of the lower Atrek region published some years ago is now being extended on the same scale to the Turkoman Daman-i-Koh ("Skirt of the Hills") as far as Sarakhs and Merv.

By the boundary treaty of 1882 some fertile valleys draining to the Atrek, with extensive grazing-lands and magnificent oak forests, have been restored to Persia. But in return for this concession the Shah surrenders to Russia his claims to the suzerainty of Merv, the "Key of India," as well as some of the Kopet-dagh valleys west of Askhabad, and south of Geok-tepe. Here the Russians have absorbed the whole of the southern declivity as far as the water-parting, and have thus acquired complete control over the streams irrigating the oases of their new Turkoman subjects.

Special importance is imparted to this border range by the presence of springs and running waters, which evaporate in the sandy plain at a short distance from the hills. The Persian inhabitants of the uplands are the natural owners of these streams, which they utilise in the irrigation of their fields. But in this dry and sultry climate the water seldom suffices for the wants of all the riverain populations, so that those dwelling along the upper and lower course of the rivers necessarily become hostile to each other. During the flourishing periods of the Persian monarchy the whole of the Atok, or Daman-i-Koh—that is, the fertile zone at the northern foot of the hills—was held by the Iranians, who drove the Turkomans into the desert, and guarded the arable lands from their attacks by a chain of

walled towns and strongholds. But whenever these formidable nomads succeeded in breaking through, they avenged themselves by the capture or slaughter of those who had deprived them of the fertilising waters and of all the arable or grassy tracts. Before the advent of the Russians the border-lands knew no respite from the Turkoman marauders, while traditional hatred was intensified by differences of race, religion, and customs, and kept alive by the unequal distribution of the waters. Now the frontier-line between these antagonistic elements has been laid down by Russia, which has assigned some of the rivers to the Turkomans, and forbidden the Persians to enlarge their cultivated riverain lands, or increase the number of their irrigating canals. But seasons of drought cannot be prevented, and then the old animosities may easily be revived in a region where the very conditions of existence seem to constitute an obstacle to the perfect harmony of the conterminous populations.

In its eastern section the border chain, whose upper slopes are covered with juniper, maintains a tolerably uniform elevation, ranging from 8,000 to 10,000 feet. Projecting towards the plain are several lofty spurs, the most remarkable of which is the famous Kelat-i-Nadir, or "Nadir's Fort," so named from Nadir Shah, who had made it one of his chief strongholds. It consists of a limestone rock running about 20 miles east and west, with a mean breadth of 6 miles, and rising 1,000 or 1,200 feet sheer from the plain. A torrent rising in the southern highlands penetrates through a fissure into the interior, where it is distributed in irrigating canals over the fertile plots filling the cavities of the plateau. In ordinary seasons enough water remains to return to the bed of the stream and escape to the plains through a gorge traversing the rocky mass from south to north. The atmosphere of the district is at times rendered very insalubrious by the marshy soil at its outlet. The two gates traversed by the stream, as well as three other breaches opened in the surrounding ramparts, are all carefully fortified, and the culminating-point towards the west is crowned by a dilapidated citadel, amid whose ruins a small village has sprung up. From the old fortified palace of Nadir an extensive view is commanded of the grey Turkoman plains, while southwards the horizon is bounded by the long chain of the Kara-dagh, or "Black Mountains," which are continued westwards by the Hazar Masjid, or "Thousand Mosques." The highest peak, which gives its name to this range, is broken into a multitude of pointed eminences, compared by the fervid imagination of the pilgrims from Meshed to gigantic minarets.

North-west of Kelat-i-Nadir the main range throws off other elevated spurs, enclosing the rich and productive basin of Dereghez, or the "Tamarind Valley," whose exuberant vegetation rivals that of the Caspian seaboard in the provinces of Ghilan and Mazanderan. Askhabad, standing at the foot of these advanced hills, forms the present terminus of the railway constructed by the Russians during the late Turkoman war, which is doubtless destined in the near future to be continued round the foot of the hills to Afghanistan. The Russian engineers have also projected a line through one of the Dereghez valleys, and across the main range south-eastwards to Meshed. A short distance beyond the Garm-ab Pass, both

KELAT-I NADIR—ARGHAVAN-SHAH GORGE.

slopes the of water-parting are included within the new Russian frontier, which here descends into the valley of the Sambar, across its tributary, the Chambir, and along the parting-line between the Sambar and Atrek basins, to the confluence of these rivers. In this region the hills fall gradually towards the Caspian, so that the Iranian plateau is easily reached by travellers following the numerous valleys between the divergent mountain ranges.

The Atrek, chief affluent of the Caspian on its Asiatic side, gives its name to the whole basin comprised between the Kopet-dagh and Iranian tableland. The main stream, which has a total length of not less than 300 miles, reaches an elevated plain near Kuchan (4,500 feet), which forms the water-parting between the Caspian and Heri-rud declivities. Here we have a striking illustration of the fact that the dividing lines of water systems do not always coincide with the crests of main ranges. In this region of North Persia the horizon is everywhere limited by lofty chains, while the drainage westwards to the Caspian and eastwards to the Herat River is determined by scarcely perceptible differences of level on the surface of the land. As in so many other cases, the perennial head-stream, although not the largest, is regarded by the natives as the true source of the Upper Atrek. This spring, known by the name of the Kara Kazan, or "Black Cauldron," forms a basin about 150 feet broad, in which the slightly thermal waters well up through a thousand vertical channels and remain in a constant state of agitation.

The hills south of the Atrek valley, although falling to a lower mean altitude, are dominated by several peaks higher than any of the summits in the Kopet-dagh system. Thus one of the crests visible to the west of Meshed appears to attain an elevation of over 11,000 feet; the Shah-Jehan, near the water-parting between the Atrek and Kashef-rud, is said to be about the same height, while the Ala-dagh and Kurkud, south-west and west of Bujnurd, rise to 12,500 and 12,700 feet respectively. All these north-eastern chains run mainly parallel to the Kopet-dagh, that is, north-west and south-east; but they present a less uniform aspect, and are broken by a greater number of fissures than the border range. Yet they are less accessible to travellers, owing to a greater lack of water, and consequent scanty vegetation. The rains brought by the polar and equatorial winds being both alike intercepted by the border chains, but little moisture remains for the uplands lying within the outer barriers of the Iranian plateau.

The north-eastern highlands vary greatly in breadth, those lying between the Astrabad and Shah-rud plains in the west being scarcely 25 miles wide, while in the east the orographic system broadens out in a vast semicircle sweeping round between the great desert and Afghanistan. Here as many as twelve lateral ranges, nearly all following the normal south-easterly direction of the Persian Mountains, are crossed by the route from Meshed to Sistan over passes varying from 3,000 to upwards of 6,000 feet in height above the sea. On the other hand, the intermediate depressions between the parallel ridges are often mere sandy wastes, rendering the approach from Afghanistan equally difficult whether the route follows the valleys or the crests of the hills.

The mountains whose wooded slopes skirt the southern shores of the Caspian

are commonly called the Elburz range, although this term belongs properly to an isolated mass rising to the north-west of Teheran. This is the ancient Alborj, the "first mountain whence sprang all others," the centre of the seven "symmetrical divisions of the earth, corresponding to the seven heavens of the planets and the seven circles of hell, the glittering peak that pierces the sky, the source of streams and cradle of mortals."

All these uplands between the Caspian and the plateau consist, not of a single range, but of several distinct masses connected together by secondary ridges. The Shah-Kuh ("King's Mount"), the first of these masses to the east, is one of the highest of the system. Its rugged crest, contrasting with the rounded or flat summits of the other Elburz mountains, rises immediately to the west of the grassy heights separating the plains of Astrabad from those of Shah-rud. It is traversed by one of the most frequented historic routes between Iran and Turan, which crosses the Chalchanlyan Pass at an elevation of 8,700 feet, above which the highest peaks attain an absolute altitude of 13.500 feet. The northern cavities remain throughout the year filled with masses of snow, and the village of Shahkuh-Bala, lying probably at an elevation of 8,000 feet, is supposed to be the highest group of habitations in Persia. Deposits of coal and salt are found in the limestone and sandstone rocks of the Shah-Kuh and neighbouring hills.

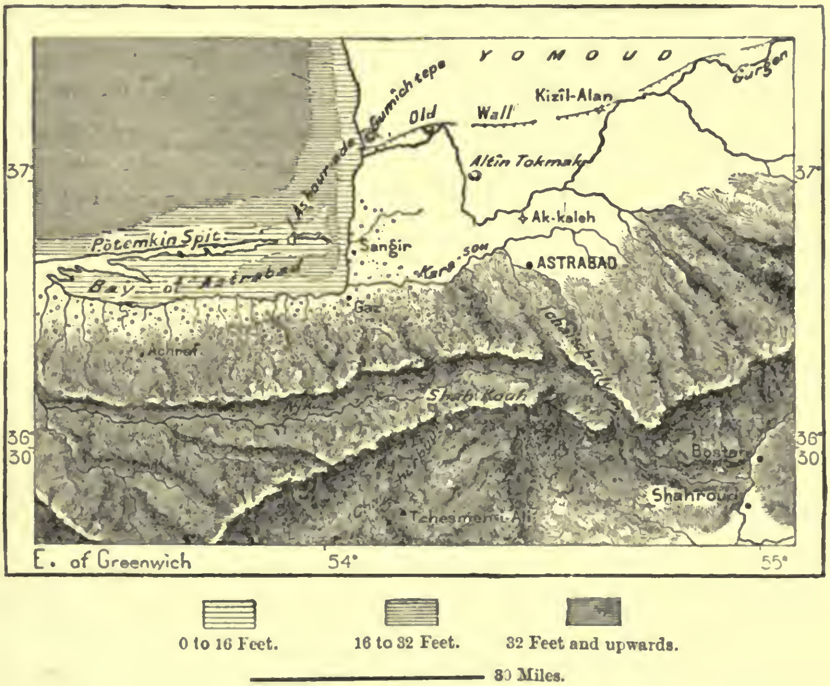
More frequented than the Chalchanlyan is the Shamsherbur or "Sword-hewn" Pass, which skirts the west side of the Shah-Kuh, thereby shortening by one day the journey from Teheran to the province of Astrabad. It takes its name from the popular belief that it was hewn out of the mountain by the sword of Ali; and few other passes look more like the work of man. At the culminating-point it is flanked for a space of 450 feet by two pillar-shaped rocks, whose polished walls, standing about 20 feet apart and from 20 to 30 feet high, are completely detached from the side of the mountain. Although Napier may be wrong in identifying it with the "Caspian Gates" of the Greek writers, this natural gallery is certainly one of the oldest routes of Media, and the sacred character of the whole district is attested by various still-remembered local legends. Near the village of Astana, at the junction of several routes south-west of the pass, a rock bearing the impress of a human foot was formerly attributed to the gods, but is now regarded by devout Shiahs as a mark of Ali's presence. The spot, however, is carefully guarded from the prying eyes of sceptics, more numerous in Persia than elsewhere in the Mohammedan world. In the vicinity is the Cheshmeh-i-Ali, or "Fountain of Ali," probably the most copious spring in the whole of Persia, with a flow, according to Napier, of about 75 cubic feet per second. Round about Astana this perennial stream has created a smiling oasis in the midst of the desolate yellowish rocky scenery so characteristic of the southern slopes of the Elburz highlands. To its waters are attributed mysterious virtues, which, while purifying the soul, act also efficaciously especially in the treatment of cutaneous affections.

Beyond the Shamsherbur Pass, the main range is regularly continued under the special names of Hazarjar and Savad-Kuh towards the south-west, everywhere presenting to the Caspian steep richly-wooded slopes, but falling down to the

TYPES AND COSTUMES—GROUP OF HAZAREHS.

tableland through a series of rocky or grassy terraces, destitute of timber, except in a few depressions watered by perennial springs. The Tilar or Talar, the most copious river in this part of Mazanderan, receives its first affluents not from the northern but from the southern slopes, rising on the Khing plateau at an altitude of 9,500 feet, and after collecting a large number of head-streams, forcing its way through a gorge in the Elburz range northwards to the Caspian. This defile is flanked on the east side by the Nezwar, a lofty peak rising to a height of 13,200 feet, and almost completely surrounded by affluents of the Talar. The approach to the pass near the village of Firuz-Kuh was formerly defended by some forts now in ruins, and attributed, like so many other structures in the East, to the Macedonian

Fig. 29.—Mountains and Passes of Astrabad.
Scale 1 : 1,600,000.



conqueror. This section of the Elburz is separated from the arid plains of the interior by the Samnan, a parallel but far less elevated range, consisting to a large extent of conglomerates and rolled detritus. From this range a spur now known as the Sirdara chain projects far into the plain across the main highway, and is surmounted by a pass probably identical with the "Caspian Gates" of the ancients. The ruins of numerous fortifications attest the great importance at all times attached to this defile, which avoids a long round through the saline wastes of the south or over the rugged northern highlands.

The Demavend volcano, culminating-point of the Elburz, above which it towers to an absolute height of over 18,000 feet, does not belong geologically to the same orographic system. It consists exclusively of eruptive rocks and ashes,

whereas all the surrounding hills are sedimentary formations, whose limestone and sandstone strata have not been at all disturbed by the appearance of the higher cone. East of the volcano, however, an enormous crevasse serves roughly to indicate the line of separation between the igneous matter ejected from the crater and the sedimentary layers, which at several points crop out above the volcanic scoriæ and lavas. The central cone is inclined a little towards the west, as if its eastern base had been tilted up, while the peak is encircled by the semicircular remains of an older crater, like another Somma attached to a higher Vesuvius. The altitude of this giant of the Elburz and loftiest cone in Persia has been diversely estimated by Kotshy, the first who after Aucher Eloy reached the crater, at from 13,000 to 15,500 feet, by Thomson, Lemm, and others at upwards of 20,000, and lastly at 18,700 feet by Ivashintzov, who took accurate trigonometrical surveys of the mountain. It is visible even by moonlight from Teheran, and from the foot of the Kashan hills beyond the desert. Although there appear to have been no eruptions during the historic period, columns of smoke frequently ascend from the fissures, and especially from the Dud-i-Kuh, or "Smoky Peak" on the south side. The copious thermal springs which well up round about the cone appear to be formed by the melting snows oozing out through the surrounding igneous deposits, and emitting sulphurous odours injurious to vegetation, but credited by the natives with healing properties. Copious ferruginous and other mineral waters also flow from the slope of Demavend, which seems to have been still active when the old lakes of the Iranian plateau had already been filled with alluvia.

According to the local legends, Demavend, or Divband, that is, "Dwelling of the Divs or Genii," has been the scene of all the events veiled under the form of myths. Here, say the Persian Mohammedans, Noah's ark was stranded; here dwelt Jemshid and Rustem, heroes of the national epics; here was kindled the bonfire of Feridun, vanquisher of the giant Zohak; here the monster himself is entombed, and the smoke of the mountain is the breath of his nostrils; here also is chained down the Persian Prometheus, Yasid ben Jigad, whose liver is eternally devoured by a gigantic bird. The caverns of the volcanoes are full of treasures guarded by snakes, which, however, do not prevent the natives from utilising the sulphur deposited in the crater and surrounding cavities. Many engaged in this industry perish in the sudden storms, which raise dense clouds of snow and ashes mingled with suffocating sulphurous exhalations. From the crater, which is filled with ice, the eye in clear weather sweeps over a vast horizon 50,000 miles in extent, embracing the blue waters of the Caspian, the surrounding highlands, and the Iranian tableland studded with the dim outlines of towns and green oases.

North-west of Demavend the Elburz takes a north-westerly trend parallel with the Caspian, but gradually drawing nearer to the coast. Here the Tochal rises to an absolute height of 13,000 feet above the plain of Teheran, while several passes stand at an elevation of over 8,000 feet. One of the peaks north-west of Teheran, although not the highest, is specially designated by the name of Elburz, and another, forming the culminating-point of the north Persian Alps, is one of those "thrones of Solomon" (Takht-i-Sulaiman) which are found in every Moham-

medan land. It seems to attain an altitude of over 14,600 feet, and still sparkles

Fig. 30.—Demavend—Views taken from the North-West.

in the July sun with the glint of its winter snows. But there are no traces of old

or recent glaciers, nor is there apparently any evidence of a glacial period in Persia, which nevertheless retains so many indications of a remote epoch of snows and abundant rains. A little to the south-east of the Takht-i-Sulaiman stands the frowning Alamut, or "Eagle's Eyrie," chief stronghold of the "Old Man of the Mountain," the theocratic king of the "Assassins," that is, of fanatics maddened by "hashish." After a long siege this place was captured by the Mongols in 1270, and with it fell the hundred other castles of the sect. But the religion of these so-called Ismaili still survives, and the direct descendant of the "Old Man of the Mountain" is a peaceful citizen of Bombay, depending for his support on the voluntary contributions of his followers.

Beyond the Takht-i-Sulaiman the main range is continued at a lower elevation by the grassy Saman hills, which are pierced by the copious Sefid-rud, or "White River," flowing from the Kurdistan highlands to the Caspian. West of the Heri-rud, this is the only stream that makes its way through the northern scarp of the plateau—a geographical phenomenon no less remarkable than that of the local climate. All travellers speak of the terrible northern wind which in summer penetrates from the Caspian through the Sefid-rud gorge to the tableland, continually increasing in violence until it acquires the force of a hurricane at the entrance of the gorge, where the river is crossed by the Menjhil bridge. Such is its intensity at this point, that the very animals refuse to cross the bridge for fear of being swept into the torrent beneath. The gale itself admits of a very obvious explanation. During the hot summer days the valleys sheltered from the north wind by the Elburz range become intensely hot, their rarefied atmosphere thus attracting the denser Caspian currents, which rush up the Sefid-Koh defile to the plateau. In winter, on the contrary, the colder winds of the uplands are drawn through the same opening down to the lower temperature of the Caspian.

The Elburz orographic system is usually supposed to terminate at the Sefid-Koh, beyond which the highlands sweeping round the Bay of Enzeli to the Russo-Persian frontier form a continuation of the Talish uplands, whose first eminences rise above the Mugan steppe in Trans-Caucasia. Here the crests of the hills approach to within 12 miles of the coast, and at many points they present the aspect of steep escarpments above the Caspian waters. Nevertheless the Aderbeijan plateau may be reached through several openings, and the chain is crossed at an elevation of 6,600 feet by two roads running respectively from the Russian station of Astara, and the small seaport of Kerganrud. Between these two sides of the Talish range the contrast is very abrupt; on the one hand steep declivities clothed with forest trees down to the water's edge, on the other the gently undulating slope of a plateau almost destitute of vegetation.

The Caspian Seaboard and North-Western Uplands.

The narrow strip of coast-lands between the hills and the Caspian forming the two provinces of Ghilan and Mazanderan differs so much in appearance, soil, climate, and products from the rest of Persia that it should be considered rather as a

geographical dependence of Caucasia than a portion of Iran, to which it is politically attached. So great is the contrast between the southern plateau and the fertile valleys north of the Elburz Mountains, that in this sharp opposition many writers have sought one of the chief sources of the dualism lying at the root of the old Persian religion. But if in the abundance of its running waters, its vigorous and gorgeous vegetation and productive soil, Mazanderan represents an earthly Eden compared with the dreary southern wastes, it is also constituted a land of evil by the wild beasts infesting its forests, the clouds of mosquitoes darkening the heavens, and especially the pestilential atmosphere of its marshy tracts. Hence this lovely region was in the popular fancy the home of baneful spirits; and "If you wish to die," says a local proverb, "go to Ghilan." Mazanderan also came to be regarded as a maleficent land in contrast with the encircling uplands, because these were the abode of the "heroes" and mythical conquerors of Persian poetry, whereas the unprotected coastlands were occupied by tributary and enslaved populations. A low-lying strip of territory stretching some 350 miles round the shores of the Caspian, with a mean breadth of scarcely 10 or 12 miles, was necessarily at the mercy of the surrounding highlanders, who swept down suddenly from the hills and easily carried off the accumulating wealth of the rich trading-places lying at their feet.

For its exuberant vegetation Mazanderan is mainly indebted to the moisture-bearing northern winds blowing inland from the Caspian. According to the approximate estimates of recent observers, the rainfall on the northern slopes of the Elburz is about five times heavier than on those facing southwards. The vapour-charged clouds rising from the sea are generally arrested by the crests of the encircling ranges, and the water here discharged returns in numerous torrents and streams to the Caspian. Owing to this unequal distribution of the rainfall, the most marked contrast is presented by the northern and southern declivities of the Persian Alps. The latter rise in regular terraces above the plateau, while the former are everywhere furrowed by deep gorges, whose detritus has been distributed in the form of alluvia and gravel over the intervening narrow belt of low-lying coastlands. Every advanced spur is continued seawards by parallel lines of headlands, each marking the entrance of some river valley, with its side branches and a complete network of torrents, streams, and irrigating canals. Hence, although lying north of the thirty-sixth parallel, the Mazanderan seaboard is characterised by a semi-tropical vegetation, fully as rich as that of Southern Europe The steppes and deserts stretching north of the Caspian are succeeded southwards by a rich Italian landscape, where flourish the almond, fig, pomegranate, orange, and citron. The hills are clothed with box and cypress groves, while the higher grounds are covered to an altitude of over 6,000 feet with forests of beech, ash, oak, and other European trees. The low-lying cultivated tracts are also extremely fertile, and in the language of Strabo, "The grain here falling from the ear suffices to raise a fresh crop, the trees serve as hives for the bees, and distil honey from their leaves."

Mazanderan thus continues to be the garden of Persia, supplying the neigh-

bouring capital with rice, wheat, fruits, raw silk, with fuel from its forests, and fish from the Caspian. Hence the jealous care with which the Persian sovereigns have guarded this rich province from the raids of the Turkoman marauders holding the Atrek and Gurgen valleys south-east of the Caspian. Easily defended on its western flank, where the spurs of the mountains advance close to the sea, the Mazanderan plain broadens out on the opposite side towards the valley of the Gurgen, that is, the "Wolf River," which gave its name to the Hyrcania of the ancients.* Hence this approach had to be protected by towers and ramparts running from the foot of the hills to the coast. It was this barrier that arrested the advance of the mythical Yajuj and Majuj tribes, that is, the "Gog and Magog" of the mediæval Arab writers. But in historic times it has more than once been broken through, and the present population of Mazanderan includes a large number of agriculturists descended from Turkoman nomads.

Although within 20 miles of the shore the Caspian reveals depths of 300 to 400 fathoms, the Mazanderan coast is completely destitute of good harbours. The alluvia washed down by the mountain torrents is distributed along the seaboard, which here almost everywhere develops straight lines or slight curves. The only important seaward projection is formed by the deposits of the Sefid-rud, which advance at least 15 miles beyond the normal coast-line. Thus is formed the extensive inlet which receives the western branch of the delta, and which is known as the Murd-ab, or "Dead Water." Although 160 square miles in extent, it is so shallow that it is navigable only in a few narrow channels, while the bar at Enzeli is inaccessible to vessels drawing more than 2 feet. The swampy reed-grown tracts stretching far beyond the limits of the lagoon give their name to the province of Ghilan, that is, "the Marshes." Owing to the annual floodings of the Sefid-rud, its banks have been considerably raised, and according to a local tradition the town of Langherud, now lying some miles inland, was still a seaport on the Caspian so recently as the middle of the last century. Anchors are even said to have been dug up in the neighbourhood.

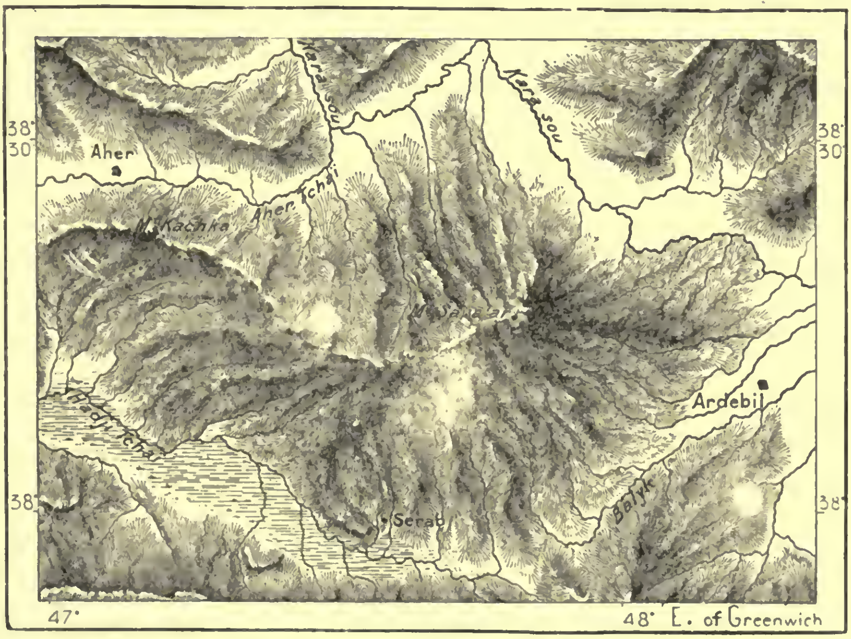
Corresponding with the Murd-ab in the west is Astrabad Bay at the south east corner of the Caspian, which, however, is much deeper, and accessible in fine weather through several channels to vessels drawing from 12 to 14 feet. It is separated from the open sea by a tongue of land, which gradually narrows eastwards, where it terminates in three islets, of which the largest, Ashuradeh, has been chosen by the Russians as a naval station. Nearly the whole of the surrounding coast is covered with thickets well stocked with game. Astrabad Bay presents on the whole the appearance rather of a flooded district than of a natural inlet of the sea, a view that is confirmed by analogous cases of submersion at several points along the Caspian seaboard, and especially at Baku and Gumish-tepe, close to Ashuradeh. On the other hand evident traces of upheaval, or at least of a former higher level, can be detected along the coast, dating, perhaps, from the time when

* The roots *hyrc* and *gurg* (wolf) are identical in old Aryan, and are explained by the Latin *gurges*. For the interchange of *h* and *g* compare Latin *homo* with Gothic *guma* = *man*, as in the English *bridegroom*.—Editor.

the Caspian was still connected with the Euxine. High above the present sea level the old beach is fringed in some places by the stems of trees half buried in the soil, all belonging to the same species still flourishing on the neighbouring uplands. The fossil shells are also identical with those now inhabiting the surrounding waters, although no trace can be discovered of the cardiaceæ at present so common in the Caspian.

West of the Talish hills stands the almost isolated Savalan volcano, whose highest cone, attaining an elevation of over 14,000 feet, is almost constantly covered with snow. Although abundant hot springs well up at its base, no trace of a crater has been discovered, nor does it appear to have been the scene of igneous disturbances during historic times. It is completely detached from the surrounding

Fig. 31.—Savalan.
Scale 1 : 180,000.



15 Miles.

mountains on all sides except the west, where it is connected by a chain of hills with the Kara-dagh ("Black Mountains"), whose crests develop a semicircle south of the gorges of the Aras River, and terminate in Armenia at Ararat. The Kara-dagh thus forms the north-west border-range of the Iranian plateau. But it cannot be regarded as a natural limit, for the North Persian, South Trans-Caucasian, and Turkish Armenian highlands constitute collectively a single orographic system, connecting the Iranian with the Anatolian ranges. This is the upland region to which Carl Ritter has applied the general designation of "Medic Isthmus," a region of rugged plateaux, whose lowest depression, flooded by Lake Urmiah, still maintains an elevation of 4,400 feet above sea level.

In north-west Persia the culminating-point is Mount Sehend (11,800 feet),

which at its base has a circumference of 90 miles, and which plunges its roots deep into the basin of Lake Urmiah. Consisting chiefly of trachytes, limestones, schists, sandstones, and conglomerates, Sehend abounds with mineral waters of all kinds, hot and cold, acidulated, ferruginous, sulphurous, while the saline streams flowing from the west slope to Lake Urmiah tend to increase the quantity of salt contained in the waters of that basin. A deep cavern in the mountain emits carbonic acid in such abundance that animals penetrating into this fissure perish inevitably. The entrance is encumbered with heaps of bones, and according to the local tradition it takes the name of Iskanderiah, or "Alexander's Grotto," because the Macedonian conqueror concealed his treasures in its poisonous atmosphere. On the east side the rocks contain rich copper and argentiferous lead ores.

South of Savalan the triangular region comprised between Elburz and the west Persian border-chains is occupied by various mountain masses and ridges forming a transition between the two orographic systems. Of these the most imposing is the famous Kaflan-Kuh, at once a climatic and historical frontier, which runs nearly parallel with the Elburz, joining it at its south-east extremity, while on the other three sides completely limited by the long bend described by the Kizil-Uzen before effecting a junction with the Shah-rud above the Menjhil Gorge. North of this parting-line the climate is moist and the grassy steppe well watered by perennial streams; south of it the air is much drier, the land more arid. On one side the population is chiefly of Turki, on the other of Iranian, stock. Hence, notwithstanding its moderate elevation compared with the Elburz, Kurdish, and Armenian highlands, the Kaflan-Kuh is regarded as forming part of the continental diaphragm, and in any case it really belongs to the orographic system which forms the water-parting between the Caspian and the Persian desert. It consists of marls partly disturbed, and even changed to a sort of porcelain, by volcanic eruptions of porphyry. The lofty Khamseh ridge, which stretches southwards between the Elburz and the Shah-rud valley, abounds in minerals, and one of the spurs crossed by the road from Sultanieh to Kasvin forms a solid mass of ferruginous ores with a very high percentage of metal.

The Kurdistan mountains, some of whose peaks are nearly as high as the Sehend, are connected with the Tendurek cone over against Ararat, and like it are partly of volcanic origin. In this upland district a crater has been opened whence the lavas have flowed in a broad stream over the sands and gravels of the valley of the Selmas, a north-west affluent of Lake Urmiah. Here the river flows at some points between basaltic cliffs over 300 feet high. The upper crests seem, like the Sehend, to consist mostly of trachitic porphyries. All these west Persian highlands run with surprising uniformity north-west and south-east, with a somewhat more southerly trend than the Great Caucasus and North Khorassan ranges. Most of the chains consist of tertiary limestones and chalks, whereas the spurs advancing towards the Tigris are mainly more recent nummulitic and sandstone formations. The West Persian frontier highlands are sometimes collectively known as the Zagros Mountains, although this Greek appellation applies properly only to the range skirting the Mesopotamian plains and separated by the Kerkha river-valley

HAMADAN AND MOUNT ELVEND—VIEW TAKEN FROM THE SOUTH-EAST.

from the more easterly Luristan and Khuzistan systems. They are fissured at intervals by broad *tengs,* or gorges, occurring not in the lower chalk and nummulitic ranges, but in the more elevated sections, so that they are evidently due rather to fractures in the crust of the earth than to slow erosive action. From the large number of these defiles, through which the routes ascend in a succession of terraces

Fig. 32.—Khuzistan Border Range.

Scale 1 : 1,600,000.

from the Mesopotamian plains to the Iranian plateau, the whole region takes the name of Tengsir, or " Land of Gorges."

The Western Highlands and Great Deserts.

The general elevation of the West Persian highlands, as determined by the English surveyors appointed to lay down the Turko-Persian frontier-line, was found to be greater than had hitherto been supposed. Amongst the most conspicuous peaks is the famous Elvend, the Revand of Iranian mythology, a mass of quartz and granite rising to a height of 11,000 feet south of Hamadan, which city itself stands some 6,000 feet above sea level. Elvend is covered with snow for eight months in the year. Mount Alijuk also, south of Ispahan, is said to have an

elevation of 14,000 feet, but all these highlands appear to culminate in the Kuh-Dinar, which runs north of Shiraz parallel with the Persian Gulf, and which from the sea near Bushir is visible for a distance of over 120 miles, towering above the intervening ranges, themselves exceeding 9,000 or 10,000 feet. According to Saint John some of its peaks are at least 3,000 feet higher than had been supposed, and the Kuh-i-Dena, the colossus of these highlands, is believed considerably to exceed 17,000 feet, being thus second to Demavend alone in the whole of Hither Asia west of the Hindu-Kush. But some of the lower ranges of the Tengsir region are even of more difficult access than the giants of the plateau. At certain points they present vertical walls 1,500 or 1,600 feet high, thus forming the so-called *diz*, or natural strongholds, which can be reduced only by hunger. Yezdijerd, the last of Persia's native sovereigns, held out for some time in one of these rocky citadels against the Arabs.

The violent disturbances by which the northern ranges were deflected parallel with the Persian Gulf, and with its former northern extension now filled by the alluvia of the Tigris and Euphrates, have also given to the Laristan system a direction mainly parallel with the Strait of Ormuz. Here the Jebel-Bukun, north-east of Bandar Abbas, attains an altitude of 10,700 feet. But while the coast ranges generally run east and west, the neighbouring island of Kishm is disposed in the direction from south-west to north-east. The other islands on the east side of the Persian Gulf are mere fragments of coast ranges partly submerged, and following the normal direction of the Persian orographic system from north-west to south-east.

For a distance of 1,100 miles from the banks of the Kizil-Uzen in Azerbeijan to the Bampusht uplands in Baluchistan, this direction is mainly followed by a chain of mountains, which in some places assume quite an Alpine character. The Garghish and Darbish, south-west and south-east of Kashan, are both over 11,500 feet high; while the snowy Shir-Kuh, south of Yezd, exceeds this elevation by nearly 2,000 feet. According to Saint-John, various summits in the Jamal-Baris, or "Cold Mountains," as well as the basalt Kuh-i-Hazar, south and south-west of Kirman, all rise to heights of 13,500 feet and upwards, while the Kuh-i-Berg on the Baluch frontier still maintains an altitude of 8,000 feet. In this little-known south-east corner of Persia names such as Sefid-Kuh ("White Mountains"), Sarhad ("Cold Region"), Kuhistan ("The Highlands"), all imply the presence of ranges of considerable elevation. Here also the volcanic cones of Naushadur and Basman, besides some other less elevated volcanoes in Narmashir, stand close to the edge of a former marine basin now filled with the sands of the desert. And it is noteworthy that the prolongation of the main Iranian axis through the Sehend would terminate in the extreme north-west in the corresponding igneous mass of Ararat. Along the south coast, both in the Persian Gulf and Arabian Sea, traces of oscillation have been discovered which are also probably associated with Plutonic phenomena. In Persian and Baluch Mekran numerous eminences occur which are found to be the craters of now extinct mud volcanoes.

The small isolated groups rising in the midst of the sands and clays of the

desert on the plateau also follow the general direction of the Persian mountain system, although the trap and trachitic Siah-Kuh ("Black Mountain"), some 90 miles from Teheran, runs exceptionally rather east and west. Like Elburz, although to a less extent, the Siah-Kuh, which scarcely exceeds 5,000 feet, presents a remarkable contrast between its northern and southern declivities. The latter are bare and parched, while the former are overgrown with brushwood, which in the eyes of the surrounding nomads seem like magnificent forests.

The vast triangular region enclosed by the border ranges is little more than a sandy, argillaceous, stony, or saline desert studded here and there with a few oases. "In order to form a correct idea of the more populous parts of Khorassan, we should fancy," remarks MacGregor, "a small green circle round every village indicated on the map, and shade all the rest in brown." These waste spaces, encircled on all sides by mountains, were certainly a marine basin at the time when the volcanoes rising above the northern edge of the plain were still active. The regular strata observed by Filippi on the banks of the Ahvar south-east of Sultanieh show that the basin was not completely filled in till comparatively recent times. Here the layers of sand, pebbles, and clay clothed with vegetable humus rest on heaps of débris containing pottery, incised bones, fragments of charcoal, and other remains of human industry. These deposits may be traced for a distance of over 40 miles, a sufficient proof that there can here be no question of recent disturbance and redistribution of the soil. Hence the present surface of this Iranian depression has been formed since the surrounding slopes were inhabited by man, whose pottery has been swept by the running waters down to the plain. These remains, carried down probably during a cold epoch, corresponding to the Alpine glacial period, contributed to completely fill up the Persian Mediterranean. Throughout the whole of the Iranian plateau, as well as in Afghanistan and Baluchistan, vast quantities of sand and argillaceous dust have been gradually accumulated by the weathering of the surrounding uplands, combined with the action of rain and running waters distributing the detritus over large spaces and filling up all the depressions on the plains. But although resembling in appearance the "yellow earth" of China, this detritus is now unsuitable for cultivation owing to the absence of irrigating streams. The inland sea itself could never have been dried up but for the excessive evaporation. With a more copious rainfall it might have been permanently maintained, while slowly raising its bed by the sedimentary deposits from the encircling hills, through which it must have ultimately found some outlet seawards.

In the south-eastern deserts the prevailing element is sand, disposed by the winds in ever-shifting dunes, by which caravan routes are effaced, arable tracts continually encroached upon, the very villages and towns themselves threatened with destruction. Some places have even already been invaded, and their inhabitants compelled to migrate to new homes. Elsewhere the sands themselves have been swept away, leaving nothing but the hard rocky surface, or perhaps extensive gravel tracts, like the beds of dried-up torrents. Thus within a single day the caravans will often traverse districts of very different aspect—strips of clay and

sand alternating with gravel and stony wastes. A wilderness to the north-west of Sistan has been well named the Dash-i-Na-ummed, or "Plain of Despond," and east of it, on the Afghan frontier, stands the famous Reig Rawan, an isolated bluff, noted for the music of the surrounding sands, which at times is heard a mile off.

But the most formidable desert in Persia is the Lut or Loth, as it is called by the people of Khorassan, a name associated by some with the Lot of Holy Writ, but by others more correctly explained to mean any wilderness or waterless tract. The ground of this dreary waste is almost everywhere formed by a compact layer of coarse sand bound together with salt, and covered with a lighter sand, which is blown about by every wind. Lying between the Kirman and South Khorassan highlands, the Lut is completely uninhabited, and possesses so few wells that caravans in its narrowest part have to provide themselves with sufficient water to last three days and four nights. The Gobi and Kizil-Kum themselves are fertile regions compared with this "Persian Sahara," which in the tenth century Istakhri already described as the most dismal solitude in all the lands subject to Islam. Seen from some of the surrounding heights it presents the appearance of a pale red mass of incandescent metal stretching away beyond the horizon, the fierce glare of its cloudless skies nowhere relieved by a flitting shadow from dawn to sunset. Yet it is at least in one respect somewhat less desolating than many of the Turkestan steppes. The outline of its horizon nowhere presents the form of a perfect circle, the monotonous prospect being here and there broken by bluish or violet hills, floating like light clouds in the liquid atmosphere, and serving as landmarks to the wayfarer.

The deeper parts of the Persian basins are generally occupied by saline marshes, known in the north as *kevirs*, in the south as *kefihs* or *kafahs*. Of these the most extensive is that stretching across the sandy desert, north of the Tebbes Mountains. Another, extending from the Kuh-i-Siah range towards Kashan, is said to have a circumference of 45 miles, while its real size is perhaps doubled by the mirage. Other large kevirs, the remains of dried-up lakes, are scattered over the valleys of Kirman, which, like the mountain ranges, have a normal direction from north-west to south-east. Most of these basins present a very irregular surface, being broken at various points by small hollows, presenting considerable difficulty to camel traffic. But round the edge of the true kevirs quagmires are of rare occurrence. In winter the moist earth is black and uneven, as if turned up by the plough, but in summer it is covered with a saline film, beneath which the treacherous soil remains soft and swampy for a long time. At its lowest point the kevir north of Yezd stands probably at a height of 2,000 feet above sea level; but towards the south-east it falls gradually lower and lower, sinking at Dihi-Seif, north-east of Kirman, to 1,250 feet, and at its lowest point, according to Khanikov, its absolute elevation scarcely exceeds 400 or 500 feet.

BRIDGE OF DIZFUL.

Hydrography and Climate of Persia.

It is difficult to form even an approximate estimate of the seaward drainage to the Caspian, Persian Gulf, and Arabian Sea compared with the extent of these inland basins. The respective areas have even been modified during past geological epochs. Rivers formerly copious enough to reach the coast are now lost in some inland swamp, while a number of now landlocked lakes at one time discharged their overflow to the surrounding marine basins. Similar changes are still going on from season to season, and most of the streams reaching the sea during the floods are absorbed in the sands at low water. But even including these intermittent tributaries in the outward drainage system, its whole area cannot be estimated at more than one-third, leaving to that of the closed basins about two-thirds of the West Iranian plateau.*

The short streams flowing from the Elburz range to the Caspian can alone compare in size with those of Western Europe. The Atrek and Gurgen reach the coast through a sluggish and shallow current, while the Sefid-rud, although more copious, is quite unsuited for navigation. The Jerrahi, Hindiyan (Zohreh), Shems-i-Arab, and other affluents of the Persian Gulf are mere wadies fordable throughout the year, and in summer separated by a strip of sand from the sea. Nevertheless Persia possesses one really navigable river in the Karun or Kuran, which is formed by the united torrents of Northern Susiana and Southern Luristan. Little, however, of this stream goes directly to the Persian Gulf, from which it is mainly diverted by an artificial canal to the Shat-el-Arab. It has thus become a mere tributary of the great Mesopotamian artery, like the Diyala and Kerkha, which join the Tigris higher up. Still the Karun should be the natural highway for merchandise forwarded by the Persian Gulf to the plateau, for it is nearly four feet deep throughout the year, and accessible to steamers for a distance of 150 miles from its mouth. The only obstacle to its navigation is a ledge of rocks near the old fortress of Ahwaz, where the valley is contracted by fantastic sandstone hills some 300 feet high, which at a distance look like structures raised by the hand of man. Here the river enters a gorge, in which it descends through a series of rapids between the projecting rocks all disposed parallel with the main axis of the Persian orographic system. Estcourt ascended the Karun to this point in a steamer in 1836, and six years afterwards the obstacle was surmounted by Selby, who penetrated within a mile and a half of Shuster. Still greater facilities for navigation are afforded by the Ab-i-Gargar canal, which runs west of the main stream between Shuster and the confluence of the Dizful. For two months in the year the Dizful itself is accessible to small craft as far as the town of like name, so that a whole network of water highways might be developed in this region,

* Persian areas of drainage according to Saint John:—

	Square Miles.
To the Indian Ocean	130,000
,, Caspian	100,000
,, Hamun Basin	40,000
,, Lake Urmiah	20,000
Rivers and other depressions	320,000

especially if the Ahwaz rapids were avoided by constructing an already projected canal less than two miles in length. According to M. Dieulafoy, Shuster might be reached by steamers of 600 tons burden and 120 horse-power merely by restoring the dam and locks at Ahwaz.

The streams flowing to the inland basins are relatively even far less copious than those draining seawards. This is evident from the state of the innumerable depressions on the plateau whose moisture is evaporated in the dry season, or else lost in the mud of the saline marshes. A watercourse descending from the Khuz Mountains to the south of the Lut desert traverses the whole length of the solitudes, but within the memory of man it has never been flooded. Even in rainy years the water never rises above the arable tracts, although its bed is deeply excavated by the long and constant action of an old current.

At present the rainfall, everywhere very light except on the northern slopes of the Elburz, scarcely exceeds a yearly average of 10 inches, falling in Central Persia and on the Baluch frontier to about 5 inches. This scarcity of moisture is due, as in the regions lying farther east, to the atmospheric currents, which are mainly continental. The two great marine basins of the Indian Ocean and Mediterranean lie respectively on the south-east and west, whereas the prevailing winds come either from the south-west across the African and Arabian sands, or else from the north-east across the Asiatic mainland from the polar regions to the Turkestan steppes. This last is the dreaded wind of "a hundred and twenty days," which blows, especially in Sistan, with such violence that the trees are unable to take root in the ground. To this breezy region has been attributed the invention of the windmill.

The atmosphere of the plateau is thus extremely dry, the relative proportion of humidity ranging in the cultivated parts of Kirman from 16 to 20 per cent., and falling in the desert of Lut to 11·2 per cent., the lowest that has yet been recorded on the surface of the globe. Even in West Persia the air is so dry in summer and autumn that metal objects exposed on the terraces at night retain their lustre for months together. To this deficiency of moisture must be attributed the extreme variation of temperature between day and night. In the month of July the glass has risen from 56° F. before sunrise to 133° in the sun at eight o'clock in the morning. At times the air becomes darkened by "dry fogs," during which neither dust nor dew is precipitated. Little dust whirlwinds are of daily occurrence. They spring up between nine and eleven o'clock in the morning, according to the heat of the sun, and gradually increase in number and volume till two o'clock in the afternoon. Sometimes also dense clouds of sand are formed, bounding the horizon like a solid wall. The summer heat is often as intense as in the African Sahara, and near Meshed stores of stearine and sulphate of soda have been liquefied, implying a temperature of 131° F. To the sultry region of the Lut desert, Khanikov attributes the southern deflection of the isothermal lines throughout Northern Persia; and to the same source of heat may perhaps be due the almost tropical character of the vegetation in Mazanderan compared with that of the other Caspian coast-lands. The pestilential dry wind, known as the *badeh simun*, which

occasionally blows from the desert to the coast about Bandar-Abbas, is much dreaded by travellers, who report that its victims turn rapidly blue, and soon perish.

To supply the want of a sufficient rainfall, the peasantry have developed a system of underground *kanats* or *kanots* (irrigating canals), which, like those of Afghanistan, are excavated with unerring instinct and maintained with jealous care. But even with this resource, cultivation is scarcely possible beyond the upland valleys, for there are no summer rains, moisture falling as a rule only in winter and spring. Hence in summer no water can be had except in the Alpine regions, where the deep springs are fed by the melting snows. Lower down the soil is completely dried up by the twofold action of the solar heat and kanat drainage. Except in the higher valleys, how little this dreary, parched-up land corresponds with the ideal descriptions of the national poets, Hafiz and Sadi! Long journeys must be made across the plateau and down to the intervening depressions before we meet with those spicy groves, rosy bowers, and purling brooks echoing with the song of the nightingale, which on the whole are rather the dream of the poet seeking in fancy what nature denied him. The famous Band-Emir, described in eastern and western poetry as a noble stream flowing beneath the cool shade of a rich vegetation, is merely a canal diverted by a dam from the little river which waters the plain of Persepolis. So precious is water in this arid region that an ordinary reservoir becomes a limpid lake encircled by picturesque cliffs and umbrageous slopes.

The only lake really deserving the name is the Dariacha ("Little Sea"), better known as the Lake of Urmiah, Maragha, or Armenistan, at the west foot of the Sehend, in the extreme north-west, and already within the region of the Armenian uplands. Here a delightful and ever-varying prospect is presented by the islands and headlands and surrounding hills, plunging their roots deep into the water, by the wooded shores and distant view of snowy Ararat. Yet, compared with the Alpine lakes of Central Europe, Urmiah is a mere lagoon, nowhere exceeding 45 feet, and with an average depth of probably not more than 15 or 16 feet. Hence, although covering an area of about 1,600 square miles, its volume is six or eight times inferior to that of Geneva, which is relatively so much smaller in size. Off the town of Urmiah the basin falls from the west to the east shore through a succession of five perfectly regular plateaux, while at other points the marshy banks stretch far inland through saline flats, scarcely rising a few inches above the surface. Towards the south is a group of about fifty islets, of which three are large enough to be cultivated or laid out in pastures. The water is more saline and richer in iodine than that of the Dead Sea itself. Swimmers cannot dive in it, and their bodies become immediately covered with a coating of salt, which sparkles in the sun like diamond-dust. When the wind blows, large sheets of saline foam are developed on the surface, and along the shore salt has been deposited in slabs several inches thick, and extending in some places for a distance of three or four miles. Wherever the shore is easily accessible, the natives have established salines like those of the Mediterranean, although they prefer in general the

mineral salt of the neighbouring hills, which is much purer and more easily worked. No fishes or molluscs live in the lake, which, however, teems with a particular species of small crustacea, distinguished by a thin tail, and serving as food to the flocks of swans and other birds frequenting the lake. Here are also some species of insects not found elsewhere, and a special saline flora developed on the surrounding mud renders the shore almost everywhere unapproachable. These

Fig. 33.—Lake Urmiah.

Scale 1 : 1,500,000.

blackish or dark-green tracts, sometimes shining with a metallic lustre, stretch a long way below the surface of the water, and contain magnesia and iron, beside a large proportion of organic remains. The oily residue of this decomposed matter imparts such consistency to the liquid surface that even under the action of high winds it fails to rise into rolling waves, but breaks sluggishly against the beach.

Near the Selmas valley, on the north-west side of the lake, and near the village of Dihkergan in the south-east, are the famous "marble springs," whose deposits

have supplied materials for some of the finest buildings in Persia and Western Asia. This "marble of Tabriz" is generally of a yellowish, pink, or milk-white colour, and sparkles like quartz. It often forms concretions like stalactites, and its veins of oxides impart to it the most delicate tints. It was probably deposited at a time when the springs had a much higher temperature than the present, which scarcely exceeds 65° F. The precipitates now consist of very thin snow-white layers, in other respects exactly resembling the marble of the neighbourhood.

The level of Lake Urmiah has frequently changed. According to the local tradition it was formerly much higher than at present, while on the other hand there was a time when it had shrunk to considerably lower dimensions. These oscillations are attributed by the natives to a prodigious monster who dwells at the bottom, and passes his time in alternately drinking and disgorging the waters of Urmiah. Its former higher level is in any case shown by the old water-marks on the rocks high up above the present surface, and by the headlands, such as that of Shah-i-Kuh towards the north-west in the direction of Tabriz, which at one time were islands in the middle of the lake.

At present the lacustrine level is sinking, a circumstance explained by the spread of cultivation, which necessarily absorbs a larger quantity of water for irrigating purposes. The whole basin, as far as the sources of its farthest affluents, exceeds 20,000 square miles, and the rainfall within this area, even estimating it at no more than 10 inches yearly, represents a total mass of at least 350 million cubic feet, or about half of the whole volume collected in the lake itself. According to the extent of the outflow, as regulated by the requirements of the surrounding cultivated lands, the contours of the lake must change all the more rapidly that the water is spread in shallow masses over a wider area. The area of Lago Maggiore, notwithstanding its great depth, changes as much as 16 square miles between the dry and wet seasons. Some idea may thus be formed of the great alterations presented by the surface of Lake Urmiah, a large portion of which is little better than a flooded swamp. Such a basin evidently affords little scope for navigation, and the transport of merchandise and passengers is usually effected by means of rafts. In 1838 an uncle of the Shah had himself appointed grand admiral of the lake, and to secure a monopoly of its navigation forthwith caused all the craft belonging to private persons to be seized and destroyed.

Of the numerous feeders of the lake the most important is the Jaghatu, which comes from the south, and one branch of which, the Saruk, receives a portion of its supplies from a large well on a limestone eminence known as the Takht-i-Sulaiman, or "Throne of Solomon." The hill itself, which is of oval shape and about 150 feet high, has evidently been gradually formed by the water, which precipitates layers of travatine at the orifice. Other petrifications caused by the irrigating rills derived from the main stream have sprung up here and there round about the Throne of Solomon. One of these has the form of a dragon, and is traditionally supposed to have been a monster changed into stone by the son of David. Mineral and thermal springs, acidulated, sulphurous, and calcareous, bubble up on all sides round about these eminences.

In Southern Persia the only body of water which may be regarded as a lake, if not for the depth at least for the extent of its flooded basin, is Lake Niris or Bakhtegan, which receives the discharge of the Band-Emir Canal. It stretches south-east of the ancient Persepolis, between two ranges of parallel hills, for a distance of about 60 miles, broken into several secondary basins by islands and headlands, all ramifying in tortuous channels among the side valleys, and uniting through two straits in a second reservoir, the Tasht or Nargis lying at the other side of the northern hills. The whole group is continued in the direction of Persepolis northwards to the plain of Merv. Its waters are saline like those of the Deriah-i-Nemek, a smaller basin lying parallel to it in the valley of Shiraz, and blocks of salt, like the floes of the polar seas, may be occasionally seen floating on its

Fig. 34.—Lakes Niris and Nargis.

Scale 1 : 1,400,000.

surface towards the end of summer. The surrounding limestone hills mirrored in its blue water, the ruins crowning the cliffs along the shore, the tamarinds and willows of the riverain valleys, the flocks of flamingoes and other aquatic birds giving animation to the scene, impart a great charm to the landscape of Niris, which, however, is in reality nothing more than an area of permanent inundation. For hundreds of yards from the shore it is scarcely more than 2 feet deep, and the mud when disturbed emits a suffocating odour. It is noteworthy that no mention is made by the old writers of this lake, which nevertheless lies in one of the most famous and commerical regions of the ancient world. It is first alluded to by Ibu Haukal in the tenth century, and from that time forth it is spoken of by all geographers. It is probable that formerly, when the district was covered

with cities and land under cultivation, the water flowing from the mountain gorges was used up to the last drop, so that none was left to settle in lagoons on the now flooded plains.

Flora and Fauna.

As a land of transition between Eastern Asia and the western world, Persia naturally partakes of the flora and fauna belonging to the surrounding lands. Hence according to the altitude, dryness, and special climatic conditions of its various provinces, it exhibits the plants and animals characteristic of Turkestan, Caucasia, Afghanistan, or Arabia. Persia is thus everywhere a region of contrasts, where the forests of Ghilan and Mazanderan, with their leafy foliage, creeping plants, and flowery glades are suddenly succeeded by the saline plateaux producing nothing but a little grey brushwood. Even the fertile regions themselves offer the greatest differences in the aspect of their vegetation, for all these productive lands are exclusively highland countries, where the various vegetable zones overlap each other, or follow in quick succession, according to the relief and latitude. All the higher summits are like so many islands inhabited by polar species, while the great diversity of altitude strews the land with isolated floras, rendering any broad generalizations extremely hazardous. In the north wheat is cultivated to a height of 9,000 feet on the slopes of the hills, and the flats in the neighbourhood of Lake Urmiah are occupied by rice grounds at an elevation of over 4,000 feet above the sea. In this part of Azerbeijan the fig grows only in sheltered spots, whereas the vine flourishes on the slopes of Elvend up to 7,500 feet. On the other hand, the magnolia and camellia, which resist the damp climate of the British Isles, are not found in Persia under the corresponding latitudes. The palm is cultivated only in the lower valleys of the border ranges, and in the south-east of the plateau as far north as Tebbes. But it is again met on the shores of the Caspian, and, according to a local tradition, the Mazanderan coast-lands were within comparatively recent times overgrown with palms, which have since yielded to other vegetable species. Excluding the Caspian seaboard as belonging to a distinct vegetable region, the Persian flora is on the whole much poorer than that of Trans-Caucasia and West Europe, and the local saying that "In Fars you cannot take a single step without crushing a flower," must be regarded as a poetical exaggeration.

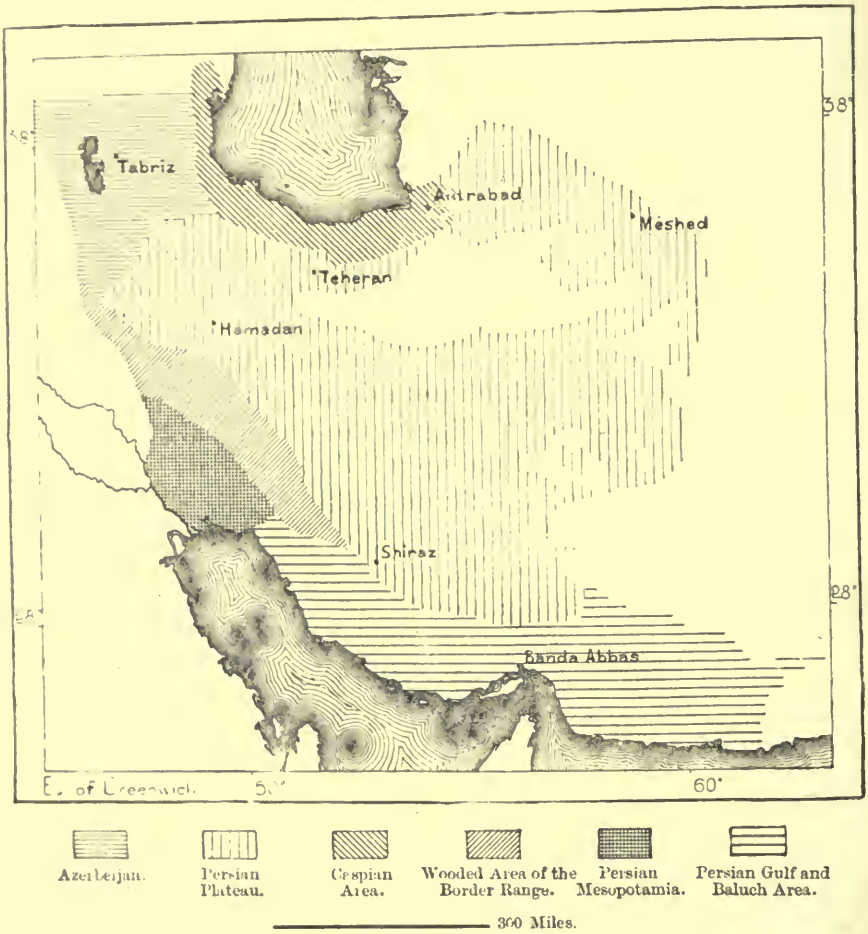
So little does the Persian fauna differ from that of the conterminous lands, that it might almost be supposed to have migrated in modern times to the plateau. The real explanation lies doubtless in the more recent drying up of the land. From the frontier upland regions, which were first upheaved, the various species gradually spread towards the centre, according as the waters subsided. The West Iranian mountains, plateaux, and solitudes, like those of Afghanistan, have their herds of wild asses and gazelles, their leopards, wild boars, bears, wolves, and foxes. In the same way Iranian Baluchistan corresponds to that of Kelat, while the West Persian frontier has on its outer slopes the fauna of Mesopotamia, that of Kurdistan in its valleys, and that of the plateaux on its rocky heights and in its kevirs. Lastly, the well-watered regions of the north-west, the Azerbeijan plains and

especially the northern slopes of the Elburz, belong to the animal as well as to the vegetable zones of Armenia and Trans-Caucasia. The summits of isolated mountains, such as Sehend and Savalan, have not only a Caucasian flora, but also several animal species, notably various kinds of butterflies, which do not elsewhere occur south of the Aras.

According to a local tradition, which may, perhaps, rest on a foundation of truth, the Mazanderan forests were formerly peopled by elephants, which were exter-

Fig. 35.—Faunas of Persia.

Scale 1 : 18,000,000.



minated by the national hero, Rustem. In its climate, flora and fauna, as well as in many popular customs, this low-lying valley resembles the Indus valley. The wild ox, hunted by the Assyrian kings in the Kurdistan highlands, has disappeared; but the maneless lion, a less powerful animal than his African congener, has held his ground in the valleys of the border ranges between the Iranian plateau and the Tigris plains. He is also frequently met west of the Shiraz Mountains in the oak forests, where he preys on the wild boar. The tiger also infests the

forests of Mazanderan. The chamois is very common on the highlands, where

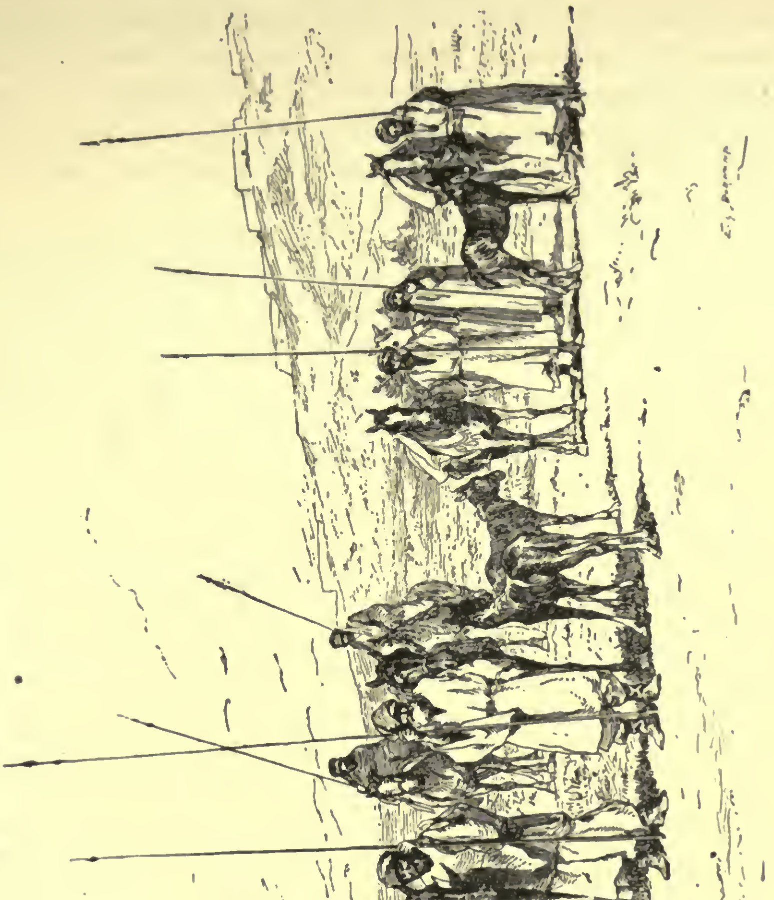


Fig. 36.—Kurdish Cavalry.

he ranges from an altitude of 1,500 feet on the Bushir hills to 13,000 feet on Elburz. The rat, said to have originated in Persia, has disappeared from the

plateau, and is now found only on the Caspian seaboard, where it has been reimported by the shipping. Altogether the Persian fauna is poor in the number of species, although the reptiles, especially lizards of quite an African type, are represented by a great many varieties. Owing to the intermittent character of the surface streams, fish are found chiefly in the underground canals, where they have adapted themselves to the dark surroundings by the gradual loss of sight. Snails and other land molluscs are nowhere to be found, doubtless owing to the general aridity of the land.

Amongst domestic animals there is at least one fine breed of horses. In the towns bordering on Turkestan those of Arab origin have acquired a surprising resemblance to the English racehorse, combined with unrivalled powers of endurance. The Kurd breed, smaller than that of Khorassan, is more elegant and not less fiery. In many parts of Fars it is customary to give the horses little pigs for companions, and the closest friendship springs up between these two animals. The camels of Khorassan and Sistan are highly esteemed, the finer specimens carrying loads of 625 pounds weight, while the ordinary camel-load varies from 125 to 190 pounds. The sheep, like those of the steppe regions, are of the fat-tailed species. In some districts they acquire an extraordinary development, and yield a wool of the finest quality. Of dogs there is one very ugly species, noted, however, for his remarkable watchfulness and sagacity. The Persians have also a very handsome breed of greyhounds, swifter than the European varieties, and several species of falcons are still trained for the chase.

Inhabitants of Persia.

Like the flora and fauna, peoples of different origin have become intermingled in the Iranian lands, some of whom still preserve their national characteristics, while others have blended in a new type. The chief ethnical elements are the Iranians, properly so called, the Turco-Tatars, the Kurds, and Arabs.

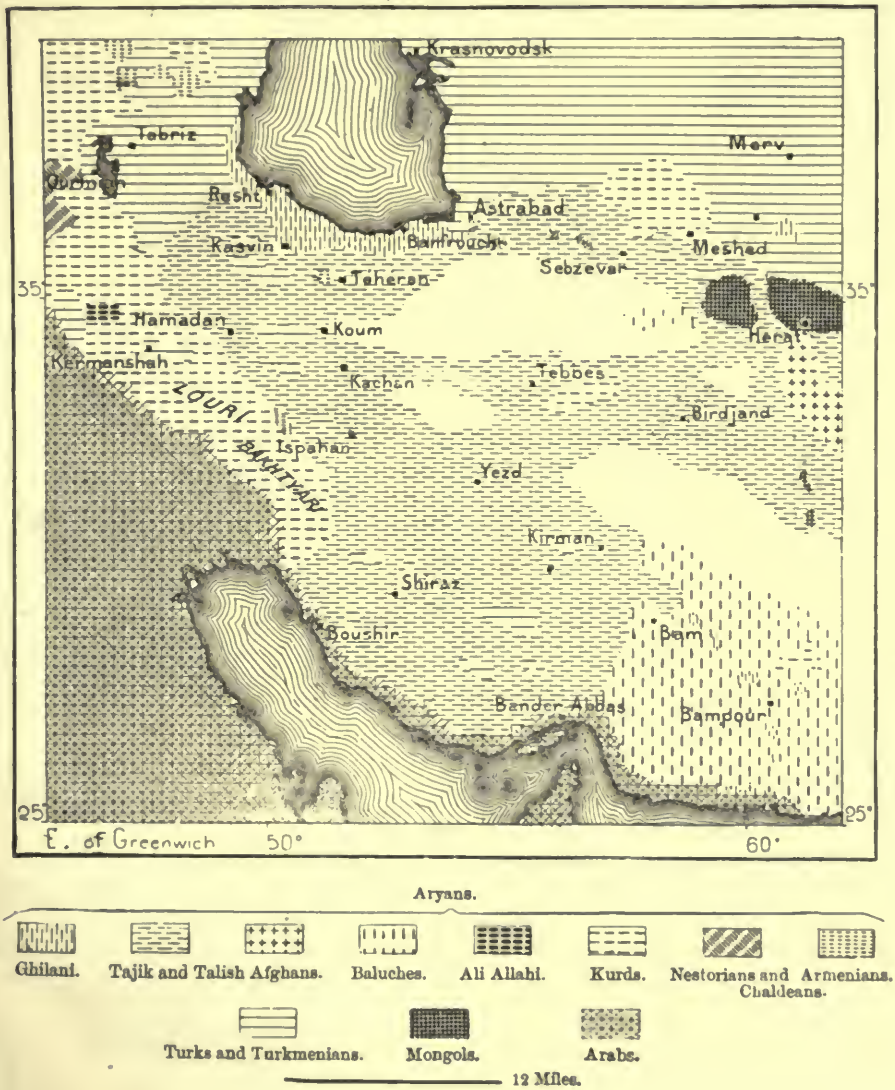
The bulk of the population is concentrated in the southern region, between Kirman and Kermanshah, where one of the provinces even bears the name of Fars or Farsistan; that is, "Land of the Farsi" or Persians. But for the whole race the collective name is Irani. Amongst the peoples of the earth the Persians are, on the whole, one of those that approach nearest to the type of beauty as understood by Europeans. Of symmetrical figure, graceful and pliant, with broad chest and noble carriage, they have, for the most part, regular oval features enframed in a setting of black curly hair. But baldness is very common, caused doubtless by the habit of wearing high head-dresses of hair or wool. The eyes, mostly brown, except in Fars, are large, with perfectly round eyebrows, long curved lashes, slightly aquiline nose, well-shaped mouth, dense wavy and silky beard. The children, especially grouped together in the schoolroom, present a charming sight, with their black curly heads, large brown eyes, and animated expression.

The form of the skull occupies an intermediate position between those of the Semites and Afghans. But if we take as typical Persians the Guebres of Yezd,

five crania of whom have been studied by Baer, the Iranian head would appear to be distinguished by considerable brain capacity. While very dolichocephalic, with index No. 70, it is lower than the Semitic but higher than the Turanian, and flattened on the upper surface. In the Darabgherd relief, which represents the triumph of Sapor over Valerian, in the year 260 of the new era, both Persians and

Fig. 37.—Inhabitants of Persia.

Scale 1 : 10,000,000.



Romans are figured bareheaded, and in the case of the former all these characteristics are plainly marked. Hands and feet are small and flexible, and although the average height scarcely exceeds 5 feet, the troops are capable of making long forced marches without apparent fatigue. Formerly tatooing was generally practised by the women, who embellished the chin, neck, chest, and stomach with

Fig. 38.—Persian Types and Costumes—Nobleman, Dervish, and Mendicant.

various artistic designs. But the practice survives now chiefly amongst the peasantry of Kirman and Persian Baluchistan. In some districts the depraved

taste of earth-eating still prevails, as does also the habit of blood-letting at every new moon, whence the cadaverous look of the inhabitants, which has earned for certain localities the reputation of being insalubrious.

The Persian type seems to have been best preserved in the eastern and central regions and upland valleys, which have been less exposed to invasion than the fertile western districts and oases. Thus the Kahrud highlanders between Kashan and Ispahan still betray the haughty expression of the contemporaries of Cyrus, and speak a dialect supposed to be closely related to the old Pehlvi. This language, which was current in Iran before the Arab conquest, appears to have held its ground in some other remote districts, while the race has been almost everywhere modified by mixture, especially with Chaldean, Kurd, Semite, and Turki elements. Under the successors of Alexander, and during the sway of the Arsacides, the people were exposed to Greek or Hellenised influences, and later on, under the Arab rule, Semitic blood penetrated to the lowest layers of the Iranian populations. For thousands of years pure or mixed Negroes, Abyssinians, and Somali have entered Persia either as slaves or traders, and certain districts of Susiana were perhaps at one time occupied by peoples of dark or negroid complexion and origin. The Turkomans and other Tatar tribes have also had a considerable share in the gradual modification of the old Iranian stock, which has been further improved by the thousands of Georgian and Circassian female slaves introduced during the three hundred years preceding the conquest of Georgia by the Russians at the beginning of the present century. On the other hand, the Persians themselves have spread far beyond the limits of their original home. Under the name of Tats and Talishes they are found to the number of about 120,000 in Trans-Caucasia, while they constitute the basis of the sedentary population in Khorassan, Afghanistan, and Trans-Oxiana, where they are variously known as Sarts, Tajiks, and Parsivans.

The Persians are not only physically but also intellectually one of the foremost races of mankind. Their quick wit, shrewdness, poetic fancy, and excellent memory excite the admiration of Europeans, while to these very qualities must perhaps be attributed a certain lack of perseverance and application. Readily grasping a subject, they seem careless of prosecuting it further. Heirs of an ancient culture, and fully conscious of their intellectual superiority over the surrounding races, the modern Iranians unfortunately yield to them in prowess. Hence in the local wars and revolutions the initiative has constantly been taken by Arabs, Kurds, Turks, Turkomans, Afghans, or Baluches, and the state itself is ruled by a sovereign of foreign origin, successor of other conquering dynasties. Deprived of that freedom by which alone the national culture and vitality might be revived, the Iranians are fain to live in the past, sedulously cherishing the old traditions of urbanity and refinement, no less rigid observers of ceremony than the Chinese themselves. Even in remote rural villages the stranger is almost invariably welcomed with courtesy, and in no other country is "the art of rising and sitting down" more punctiliously observed. Trained to jealously watch over his own emotions and their muscular expression, the adult Persian presents a striking contrast to the children of his race, who are usually full of animation and buoyant

spirits. Fond of speaking and giving free bridle to his natural eloquence, he still maintains an impassive air in mixed company, carefully discriminating the various social ranks, and assuming the suitable or conventional attitudes towards each without effort or affectation. In conversation he aptly quotes the national proverbs and poets in support of his views, leading up, with great apparent ease, to the subject he wishes to broach, and unerringly adapting his language to his audience. This characteristic is expressed in the local saying, "Birds of a feather should mate together—dove with dove, hawk with hawk."* How different this modern Parsi, by long thraldom become an adept in duplicity, from the free Persian of antiquity, of whom Herodotus tells us that he held falsehood to be the greatest of infamies. Frankness would place the peasant entirely in the hands of his oppressors; hence from generation to generation he has learnt to avoid ruin by wile. Hence those who employ their talents not only in self-defence but in pushing their way in the world, often become dangerous by their tact and spirit of intrigue, ever at the service of cupidity. One of the ordinary national types is that of the *fuzul*, who shrinks from no baseness in order to "eat." These are the first to thrust themselves on Europeans as servants, stewards, couriers, or simple advisers, and to them is largely due the unfavourable judgment so often pronounced against the whole nation. At the same time, within the race itself there frequently occur the greatest contrasts, as between the brave and energetic Talish and the craven Kashani; between the shrewd Shirazi, whose eyes beam with intelligence, and the dull Mazanderani peasant, the *yabu* or "pack-horse," as he is called, of Irania.

Fig. 39.—Noble Persian Lady.

About the dawn of history the plateau was occupied in the south by Aryans, in the north by "Turanian" Medes of distinct speech, but ruled by an Aryan caste. The country is still divided between two races, descended, with more or less intermixture, from the old stocks, still probably on the whole maintaining their original ethnical distribution. The conquering race is represented by the Turks and Turkomans, ranking in numerical importance next to the Iranians, but, like the Manchus in China, subject to their intellectual influence. Hence, although the

* "Kund hamjins bā hamjins parwāz—kabūtar bā kabūtar, bāz bā bāz."

Turks are the official administrators and almost exclusive military element, the Persians monopolise the industries, control all business relations, constitute, in a word, the civilised section of the nation. Compared physically with the Iranians, the Turco-Tatars have a rounder head, less oval face, less expressive features, smaller eyes, more massive jaws. In general they are also taller and more muscular, heavier and more awkward in their movements. They are at the same time less wily, and thus often allow the property of the plundered Persian to revert to its rightful owners. But while despising the old rulers of the land, they are always ready to make common cause with them against their Osmanli kinsmen; for they are far more alienated by sectarian hatred from the Anatolian Turk than by racial difference from their Persian fellow-subjects of the common Shiah faith. Their speech differs somewhat from that of the Osmanli, and is much more harshly pronounced, although the Anatolian and Iranian Turks are still mutually intelligible. The latter also understand and even speak Persian, which, since the middle of the present century, has again become the Court language.

Of all the Iranian Turki tribes the first rank is now taken by the Kajars, of whom the reigning dynasty is a branch. But the Afshars, whom they have succeeded, and from whom Nadir-Shah was sprung, are still by far the most numerous. At the beginning of this century their various clans comprised altogether as many as 88,000 families; and of other Turki tribes probably the most powerful at present are the Kara-geuzly of Hamadan, and the Shah-seven of Ardelil. The latter enjoy the privilege of supplying the Shah with his hundred "gholams" or bodyguard. The Turki element is naturally most numerous in the northern and north-western provinces, conterminous with the land of their origin. In Azerbeijan it comprises nearly the whole of the rural population, and numerous Tatar communities are also found in the central provinces. The Kashkai horde, dating from the time of Jenghiz-Khan, have penetrated to the neighbourhood of Shiraz, Forg, and Tarun in the south-west, where they are said to be numerous enough to supply an army of 30,000 horsemen.

In the east Iranian uplands the Tatar element is represented by those Turkoman tribes that have maintained an incessant warfare against the settled peoples of the plateau since the remotest historic times. Before the recent reduction of the Tekkes by Russia, Persians and Turkomans were continually struggling for the pastures of the border ranges, and especially for the upper course of the streams feeding the irrigation canals. In these contests the former were generally worsted, and gradually acquired such a dread of the nomads that in recent times they had almost ceased to resist them openly. The usual resource of the peasantry were the towers of refuge, thousands of which had been erected all over the frontier districts. The marauders might have even permanently occupied the uplands but for their nomad tastes attracting them continually to the open plains fringing the desert. Nevertheless some of their tribes remained here and there in possession of the conquered lands, where they either continued their wandering lives, shifting their camping-grounds with the seasons, or else established agricultural village communities. In Mazanderan, on the northern slopes of Elburz, in the riverain

districts south of the Atrek and in Khorassan as far as the limits of the desert, numerous hamlets and encampments are met still occupied by the Turkoman descendants of the former steppe nomads. At present the same movement continues, but under a more pacific form, for the Khivan and Bokhara slave-markets are now closed, frontier warfare has ceased; the towers of refuge, replaced by Russian outposts, are crumbling to ruins.

The Kurdish populations of the western and north-western highlands are ethnically distinct from the Turkomans, whom they resemble in their warlike spirit and habits. Occupying in Persia, Russian Trans-Caucasia, and Turkish Armenia most of the frontier uplands, they are politically broken into detached sections, the most numerous and united of which are found in Turkish territory. Here is the rallying-point of the whole race, those tribes only excepted which have been forcibly transplanted by the Iranian Government to the Persian Gulf, to the Kopet-dagh border ranges, and even to Mekran, in the midst of the Baluches on the south-east frontier. To the same ethnical group belong the Luri, who give their name to the province of Luristan, comprising the valleys of the Upper Kerkha basin. In speech they differ little from the Kurds, with whom, however, they would deem it an insult to be confounded, and to whom they apply the collective name of Lek. The chief Luri tribe, in some respects the most important in all Persia, are the Feili of the Upper Karun basin above Shaster and Dizful, where, according to Mourier, they comprise 100,000 tents under a thoroughly feudal system of government.

The national type and usages have also been well preserved by the Bakhtyari, that is, the "Fortunate" or "Brave," who occupy parts of Luristan and Susiana, and who are by some writers regarded as genuine Kurds, although now speaking Persian dialects. According to Duhousset, commander of a Bakhtyari regiment, they are the most brachycephalous of all Iranian races. Thickset, robust, and muscular like the Kurds, they are distinguished by their brown complexion, black wavy hair, thick eyebrows, large aquiline nose, square chin, prominent cheek-bones, bearing altogether a marked resemblance to the figures represented on the coins of the Sassanides. They camp in summer on the pastures assigned to them by usage or usurped by force, and in winter occupy small villages on the plain or lower slopes of the hills. Their two great divisions—Haft Leng, or "Seven Feet," and Chatar Leng, or "Four Feet,"—are divided into numerous *tirhas* or clans, family groups governed by patriarchal chiefs with the assistance of a council of elders. Some of the clans are regarded as specially ennobled, either through the genealogy of their chiefs or by their wealth and heroic deeds. Others, occupying a position of vassalage or subjection to the more powerful tribes, are traditionally supposed to be of inferior Turki or Persian origin. Till recently the Bakhtyari were much dreaded as brigands and plunderers of caravans. Hence travellers from Shiraz or Ispahan to the Lower Euphrates basin carefully avoid their territory, although Mackenzie, who lately ventured amongst them, was well received and provided for.*

* "Proceedings of the Royal Geographical Society," March, 1883.

A BALUCH MENDICANT.

The Arab and Baluch tribes are found concentrated chiefly in the districts bordering respectively on their native lands. Thus the Arab tribes, who claim to have originally migrated from Nejd, have their camping-grounds in the south-west, and especially in the part of the Karun plain which from them has received the name of Arabistan. So also the Persian Baluches dwell in the south-eastern province, which at one time formed part of Baluchistan, and which still retains that name. Floyer describes them as in general taller and more robust than those of the Khanate of Kelat, and many of their clans claim membership with the family of the Rinds, or "Brave," dwelling on the Indian frontiers. In some districts they are no less dreaded than were the Turkomans recently in Khorassan. Mounted on their swift camels, which cover as many as 90 miles a day, they have at times penetrated to the neighbourhood of Kirman and Yezd; but, unlike the Turkomans, these marauders never kill their victims.

Amongst the nomad tribes, estimated at a fourth, ana even a third, of the whole population of the plateau, there are many who claim Arab descent, although now completely assimilated in speech and appearance to the Iranians. Such are the "Arabs" of the Veramin district to the south-east of Teheran, who speak the local Persian dialect, and who cannot be distinguished physically from their neighbours.

All the nomads, of whatever race, are comprised under the collective name of Iliats, or "families." Their numbers increase and diminish with the political vicissitudes of the country, and when a province suffers from the rapacity of its governor, or from any other cause, the Shehr-nishin, or "town Iliats," abandon their settlements, and resume their wandering life as Sahara-nishin, or "desert Iliats." But the Kauli, Luli or Karachi, as the Gipsies of Persia are variously called, undergo no change. Adapting themselves to all religions without believing in any, they closely resemble their European congeners in their tastes and pursuits. Forgers, tinkers, fortune-tellers, tramps, horse-dealers, robbers, or state couriers, they comprise altogether some 15,000 families, encamped here and there on the outskirts of the large towns. With them may be grouped the Luti, strolling minstrels, conjurers, owners of dancing-bears, and the like, although the term is commonly applied to any tribes associated together for the purpose of robbing or raiding.

The Armenians, formerly very numerous, are now represented in Persia only by a few small communities. Most of those at one time settled in the northern districts of Azerbeijan, to the number of some 40,000 or 50,000, withdrew in 1828 to Russian Armenia, where half of them perished of cold and hunger. Not more than 2,500 families remained in Azerbeijan, and beyond this province the chief Armenian settlement is that of Ispahan, whither 12,000 families were removed under great hardships by Shah Abbas in 1605. Here they flourished for a time, but were afterwards reduced to the greatest straits by the rapacity of the local governors. Of late years the Armenians in Persia are regarded almost as Russian subjects, and thus enjoy the special protection of the powerful Muscovite ambassador at the Court of Teheran. Many are nevertheless still driven by poverty to seek their fortunes in Trans-Caucasia, India, Constantinople, and even in

China and Java. The Armenian patriarch of Ispahan, when questioned by Polak, estimated his scattered flock at about 20,000 altogether.

Still less numerous are the Persian Jews, who are greatly despised, and confined in the towns to a *ghetto* or separate quarter, as was formerly the case in Europe. Like their European brethren they offer two distinct types, one with handsome regular features, black eyes, and high brow, the other with broad faces, large nose, and crisp hair. All speak a Persian dialect with a peculiar accent and mixed with archaic expressions. As in Europe, they show a love of finery even in their pursuits, being generally embroiderers, silk-weavers, or jewellers. But amongst them are also found the best physicians and nearly all the musicians of Persia.

The European colony consists of a few adventurers and traders, besides the suites of the envoys, and such specialists as teachers, physicians, artisans, or military men employed by the Government. All look on themselves as visitors, and by the natives are shunned as strangers. Hence few settle in the country, although many Polish deserters from the Russian army have become Mussulmans, and are now classed as Iranians.

The old Zoroastrian religion is now practised by a mere handful of Persians, and in a very different form from that which must have prevailed when the doctrines of the Zend-Avesta were first promulgated. The Zardushti, or Parsis, have their chief communities beyond Persia, in Bombay and the neighbouring towns. In Persia itself they form a compact body only in the district of Yezd, or Yezdan, that is, "City of Light," and even there they number little over 8,000. Yet down to the tenth century every village had its temple, its priests, and sacred writings. But since that time the "altars of fire" erected on the crests of the hills have all been destroyed, except that of Taft, near Yezd. The Guebres, however, still enjoy the privilege of burying their dead according to the old rites, and some isolated eminence near all their communities is crowned by a *dakhmeh*, or "Tower of Silence," where the bodies are exposed to the fowls of the air. The Guebres would have long ago been exterminated as detested idolators but for a letter of the Caliph Ali promising them his protection. But this document does not exempt them from the special tax extorted from the "infidel," and their numbers have till recently been constantly reduced by the practice of kidnapping their female children and bringing them up in the Mohammedan faith. Even now the wealthy Guebre merchants are permitted to ride only on asses, and compelled to dismount whenever they meet a Mussulman. They are also obliged to wear some special marks or colours, by which the populace may be able to conveniently abuse them without the risk of attacking the "true believers." Nevertheless, the condition of the fire worshippers has been greatly improved since the middle of the present century, thanks mainly to the national spirit of the Indian Parsis, who help their Iranian co-religionists with money, and have on several occasions induced the British Government to interfere on their behalf. Some few influential Persians have begun to show sympathy for a community which has remained faithful for so many ages to the old traditions of the land. Amongst the more recent sects some have also endeavoured to bring about a revival of the Zoroastrian cult-

which in the "Shah-nameh," the great national epic of Firdusi, seems even to be celebrated in terms of scarcely disguised irony towards the Moslem innovation. "Our fathers also worshipped God," he sings. "The Arabs turn in prayer towards a stone; they turned towards the bright-coloured fire." The old religion is still

Fig. 40.—Yezd and Neighbourhood.
Scale 1 : 1,800,000.

30 Miles.

recalled by many civil ceremonies still practised by the modern Persians. Thus in Khorassan strangers are met by a deputation of villagers bearing, winter and summer, a brazier full of burning embers; and the great national feast is still that of the Nau-roz ("New Year") kept on March 20th, in honour of the new spring sun.

The Guebres of Yezd and Kirman take a leading part in the trade with India, and in all their dealings are favourably distinguished from the Persians by their honesty and truthfulness. Most of them, however, are very superstitious, allowing themselves to be blindly led by their *mobeds*, or priests, who repeat in Pehlvi prayers and formulas unintelligible even to themselves. Religion has degenerated to an intricate ceremonial, the attention of the ministers being exclusively occupied with outward forms, attitude, arrangement of the sacred homa, and of the vessels containing the juice of this divine plant (*sarcostema viminalis*), incense vases, mortars for pounding the ingredients of the traditional sweetmeats, and the like. The old dualistic faith itself has been gradually transformed to a monotheism, differing from that of the surrounding Mussulmans only in its outward form. In order to stand well with their neighbours the fire-worshippers now pretend that Zerdusht (Zoroaster), author of their sacred writings, is the same person that Jews, Christians, and Mohammedans recognise under the name of Abraham. A kind of schism has lately sprung up between the Persian and Indian Parsis, which, however, is due not to any question of dogma, but to some purely material points. Owing to their long separation, the two groups no longer keep the same calendar, and pronounce differently certain formulas of the common ritual. But in other respects their social usages remain much the same. Both expose their dead to the birds of the air, and amongst both communities unions with closely-related kindred continue to be contracted without any apparent deterioration of the race.

Nine-tenths of the inhabitants of Persia belong officially to the Shiah sect, a form of Mohammedanism which the nation may be said to have adopted in a spirit of patriotic reaction against the Arab and Turki Sunnites. While imposing their religion on the people, the conquering Arabs, or "eaters of lizards," as they are contemptuously called, failed to conciliate the friendship of the vanquished. Half a century had scarcely elapsed since the overthrow of the Sassanides dynasty before the political reaction began to be felt. The Persians showed greater zeal than the Arabs themselves for the maintenance of the Caliphate in Mohammed's family, a feeling due to the fact that his nephew and son-in-law, Ali, had married his son Hussein to the daughter of the Persian king Yezijerd, last of the Sassanides. Thus was united in the family of Ali the blood of the Prophet with that of the hereditary Persian sovereigns. But by the massacre of the unfortunate caliph in the mosque of Kufa, and of his sons Hussein and Hassan at Kerbela, both lines were simultaneously extinguished. Great was the grief of the Persian Mohammedans at this deplorable event, a grief much intensified by the atrocious details of the sanguinary drama. These details soon passed into legend, and became a source of strife between the two empires, two hostile forces perpetuating the everlasting struggle between the two principles of the old Mazdean dualism. Ali was placed on the same level as Mohammed by his partisans, who made him the *wali*, or lieutenant, of Allah himself. In the eyes of many Shiah sectaries Ali is the true successor of Ormuzd, while the Ali-Allahi (Nosairi or Naseri), who include not only Iranians, but also some Turks, and perhaps even some fragments of Jewish tribes and Nestorians, draw no distinction

between Allah and Ali, the last and most perfect of his thousand earthly incarnations. There are also some sects devoted to the special worship of the twelve imams, the descendants of the venerated caliph. On the other hand, Omar is regarded as a sort of Satan, to be cursed by all true believers. Every year a special day is set apart to celebrate the death of Omar, and pilgrims flock in thousands to the supposed shrine of his murderer at Kashan.

The Shiah sect gradually embraced the whole population of Persia, although it did not become the State religion till the beginning of the sixteenth century, at the succession of the Sefvide dynasty. It is still spreading, both in Afghanistan and amongst the Trans-Caucasian Tatars, and gives proof of its vitality by the development of a national literature, which has grown up independently of priestly influence. Formerly Ali and his sons were commemorated only by prayer, lamentations, funeral processions, accompanied by those voluntary tortures which render the Shiah ceremonies such a harrowing spectacle to onlookers. The persons of the drama —Ali, Hussein, Hassan, the women and children massacred at Kerbela—figured in these representations merely as dumb witnesses of the tragedy. But they have now become actors, and the *tazieh*, like the mediæval "mysteries," are now real dramatic pieces, into which the authors, for the most part unknown, have introduced monologues, dialogues, unforeseen incidents, departing even from the legend in order to enhance the interest of the situation. Theatrical companies, mostly natives of Ispahan, who of all Persians are credited with the finest voices and purest accent, have been formed to give representations in all the large towns. Other scenes, besides the Kerbela tragedy, have even been exhibited, and thus is slowly being developed a national drama. The families of the *Seyeds*, all claiming descent from the prophet, who form at least a fiftieth part of the whole Persian population, take a special part in the management of the tazieh.

Besides these political dissensions, many doctrinal and ceremonial differences have gradually widened the schism between the two great divisions of Islam. In Persia the old caste of the magi has undergone a slow reformation; the sacerdotal hierarchy has assumed a much more definite form than amongst the Sunnites, and the Koran, elsewhere freely interpreted by the faithful, is in Persia read and commented on only by the Mollahs. Images, held in horror by the Sunnites, give no offence to a Shiah, and a picture of the prophet Ali may be seen in almost every house in the country. Hence in some respects the Shiah sect indicates a return to the pre-Mohammedan religions, and the charge brought against it by the Sunnites of still clinging to the Zoroastrian cult would seem to be not altogether groundless.

On the other hand, most Persians secretly entertain sentiments very different from those of the official religion. The metaphysical speculations, to which all are prone, have brought about a great variety of beliefs, and the same individual will often pass successively from one system to another. Conflicting opinions are thus mutually neutralised, and great religious movements become almost impossible. Although the clergy reserve to themselves the right of interpreting the sacred writings, every Persian fancies himself a theologian, and fearlessly approaches the most abstract subjects, even at the risk of heresy. All, however, are held to be

justified in concealing their inmost convictions, and outwardly professing a faith they inwardly reject. The writings of the sectaries, like those of so many mediæval philosophers, have two perfectly distinct meanings, the official or orthodox, and the hidden or mystic, the key of which is held by the disciples, and discussed in the secret conventicles. In refined circles the most prevalent doctrine is that of the Sufis, who disregard the Mussulman practices, and whose high-priest is Shemseddin, better known by the name of Hafiz. This delightful poet, who flourished in the fourteenth century, proclaimed in exquisite verse the superiority of human morals to all mystic formulas and to all hope of reward. By constantly repeating these verses and the words of their own great writers, the Sufis give expression to their religious independence, which for some is the merest scepticism and for others is allied to metaphysical speculations. Most of the Sufis would be classed in Europe with the pantheists, believing as they do in the intimate union of all things with God, consequently recognising their own divinity, and regarding themselves as the centre of all things. Certain cynical Mollahs suggest that Sufi doctors recommend the intoxication of hashish or opium, because in the attendant visions all objects become commingled or transformed, all outlines fade away, and the dreamer is again merged in the primeval wave of universal divinity. The Persians are mostly only too prone to seek this ecstatic state in the intoxicating effects of narcotics or alcoholic drinks, eagerly degrading themselves in their desire to contemplate the universal godhead in their own hallucinations.

But during the present century society has been most deeply moved by the sect of the Babists, who have not limited their action to religious proselytism, but by invading the field of politics have been the cause of sanguinary civil strife. To their theological views, in which a great part was played by the theory of numbers and points regarded as divine manifestations, the disciples of Mirza Ali Mohammed, better known by the name of Bab, or "Gate," superadded the ideal of a new social system realised in their own communities. They recognised no method of government beyond benevolence, mutual affection, courtesy, even in serious cases tolerating no remedy except the appeal to an umpire. In the education of children the rod was laid aside, and even during study hours no check was put on their play, laughter, or on "anything conducive to their happiness." Bab condemns polygamy, divorce, the veil; he advises the faithful to be solicitous for the welfare of their women, to consult their pleasure and tastes, and refuse them no finery becoming their personal appearance. Hence the women eagerly adopted Babism, and amongst its apostles no one has left a greater name for devotion, zeal, and eloquence than the fair Zerrin Taj, or "Golden Crown," surnamed also Gurret-ul-Aïn, or "Consolation of the Eyes." By several European writers the Babi have been wrongly classed with the Communist sects. But although Bab did not recommend a community of goods, he exhorted the wealthy to regard themselves as trustees for the substance of the poor, and to share their superabundance with the needy.

When his doctrines were first formulated, neither he nor his followers had any thought of acquiring civil power. But they were driven to revolt by the persecutions of the priests, alarmed for the stability of their status. After the

sanguinary struggles of 1848 all the Babi of Mazanderan were put to the sword, the city of Zenjan delivered up to fire and massacre, and Bab himself put to death. Some of those who had escaped having attempted to revenge themselves on the person of the Shah, an order was issued for the extermination of all still professing the doctrines of Ali Mohammed. The captives were then distributed amongst the State officials, who vied with each other in giving proof of their loyalty by the refinement of the tortures inflicted on their wretched victims. Some were hacked to pieces with knives, some slowly flayed or dissected piecemeal, some bound hand and foot with iron fetters and scourged to death. Women and children moved about amid the executioners, stuck all over with burning torches, and so consumed. Above the silence of the awe-stricken multitude nothing was heard but the shouts of the torturers and the song, growing fainter and fainter, of the tortured, "Verily we came from God, and unto Him we return."

Nevertheless these butcheries do not appear to have entirely suppressed Babism, which is commonly believed to be more flourishing than ever, and all the more formidable that its operations are now conducted in secret. In Persia it has no recognised heads, although amongst its followers are some of the high-priests of the State religion, who correspond freely with Bab's successor, now resident in Asiatic Turkey. But whatever real power he may possess, it is none the less certain that Persia is now passing through a critical period of her social life. Many inward changes indicating a fresh development of the national genius seem to be imminent at the very moment that the ever-increasing pressure from without threatens to deprive her of the last semblance of political autonomy.

Topography.

In proportion to the whole population, the urban element is far more considerable in Iran than in Cis-gangetic India. The relative area covered by the large towns is also, as a rule, much greater than in Europe. The houses are low and surrounded by courts and other structures, while the palaces of the nobles occupy extensive quarters, where the stranger may easily lose his way in a labyrinth of courts and passages. Yet these buildings seldom last long, every fresh proprietor allowing his predecessor's residence to fall in ruins, either through love of change or perhaps to avoid the misfortunes by which he may have been overtaken. Fresh edifices are thus raised by the side of the old palaces, and the city continues to grow in size if not in population. Hence the crumbling ruins, often covering large spaces, have been wrongly appealed to by many travellers as a proof that the country was formerly much more densely peopled than at present.

Few cities occupy a less advantageous position than *Meshed*, present capital of Khorassan, and the largest place in north-east Persia. To the tomb of the imam Reza, one of Ali's disciples, it is mainly indebted for its present importance, Meshed the "holy" having been a mere village before the remains of that "saint" began to attract pilgrims in thousands to his shrine. Lying 3,100 feet above the level of the sea, in a dry and very moderately fertile plain some six miles south of the

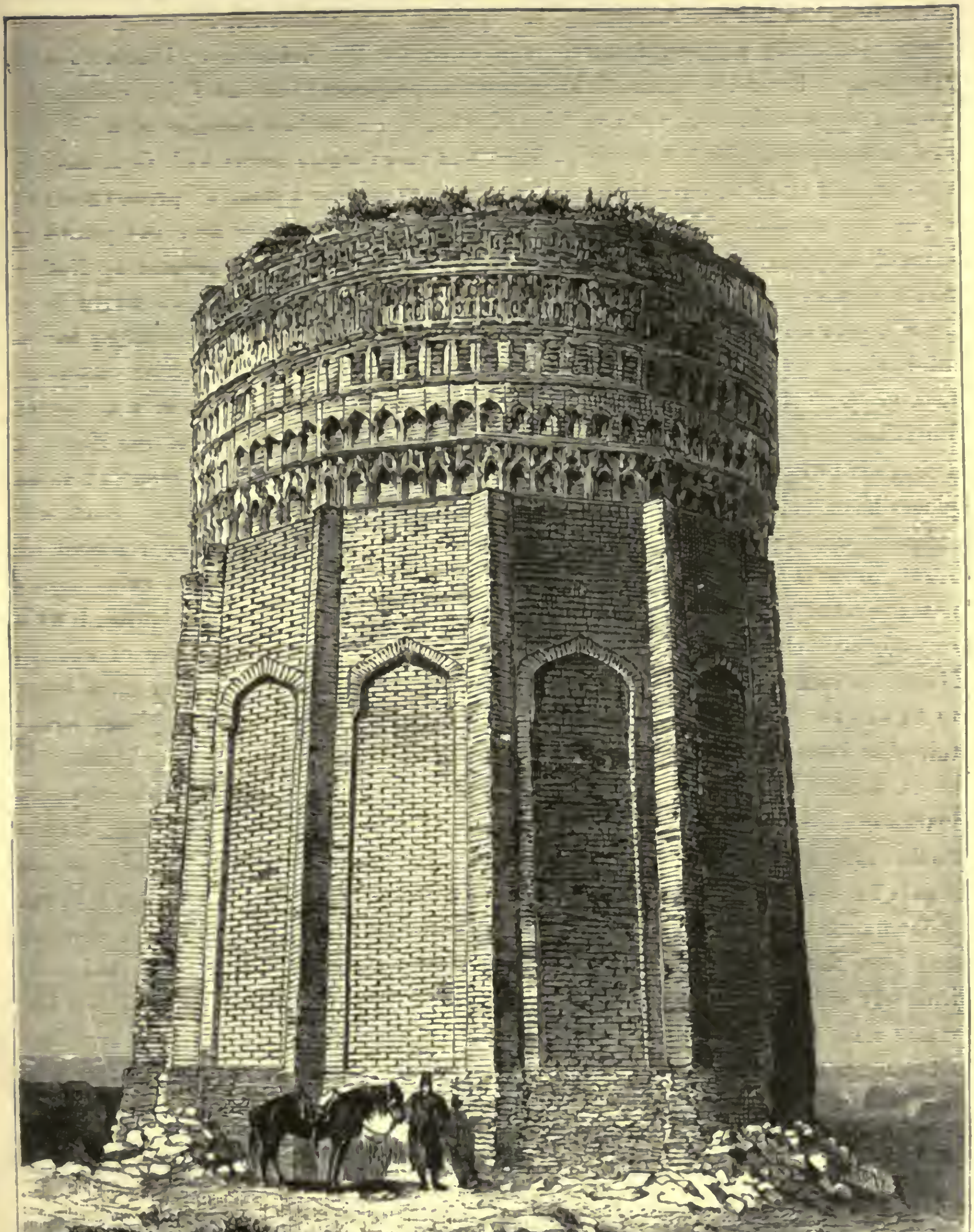
Kashaf-rud, a western tributary of the Herat River, it enjoys easy communication only with the Upper Atrek basin, running north-west between the parallel Kopet-dagh and Ala-dagh ranges. To reach any other part of Khorassan lofty mountains must be crossed, on the west towards Nishapur and Damghan, on the south and south-east towards Turbat-Haidiri, Turbat-Sheikh-i-Jami, and Herat, on the north-east and north towards Sarakhs and Kelat-i-Nadir. But the highways followed by the pilgrims have become trade routes; the hundred thousand faithful who yearly visit the imam's shrine have brought commerce in their wake, and Meshed has succeeded Herat as the commercial metropolis of Khorassan. Under Nadir-Shah it was for a short time capital of the whole empire.

The only interesting monument in the holy city is the mosque, whose golden cupola rises above Reza's tomb nearly in the geometrical centre of the place. No European has hitherto succeeded in penetrating undisguised into this building, which in the eyes of the faithful would be polluted by his presence. The precincts, however, serve as a place of refuge for criminals, and this convenient sanctuary has contributed not a little to the enlargement of the city. All pilgrims visiting the shrine receive twice a day for a week a plate of pilaw at the expense of the imam's establishment, that is, of the five hundred priests who live on the contributions and endowments of the mosque. The library attached to it contains nearly three thousand works, including some of great value. The Khiaban, or central avenue, running for about two miles east and west between the Herat and Kuchan gates, is divided by the mosque into two sections, planted with shady trees, lined by numerous shops, and watered by a running stream, which, however, is little better than an open sewer. Within the ramparts are vast spaces occupied by cemeteries, whither are brought from distances of 300 miles the bodies of devout Mussulmans anxious to ascend into heaven in company with the imam Reza. Some gardens are also comprised within the enclosures, beyond which are other cultivated grounds, not, however, sufficient for the support of the inhabitants, who depend for their supplies mainly on the caravans. In exchange these take carpets, arms, metal work, and vases of "black stone," a species of steatite yielded by the neighbouring quarries. Amongst the inhabitants of Meshed are a few hundred Jews, who were compelled in 1835 to purchase their lives by conversion to Islam, but who are merely nominal Mohammedans, still cherishing the old faith in secret.

The plain stretching north-west of Meshed and draining to the Heri-rud is dotted over with Kurdish villages, fortified against the attacks of the Turkoman marauders. In this region, which is one of the granaries of Persia, and noted for its excellent breed of camels, are also situated the towns of *Kasimabad* and *Radkan*, the latter near the marshes about the sources of the Kashaf-rud. North of Kasimabad stand the ruins of the famous city of Tus, where Harun-ar-Rashid died, and where, in 940, was born the poet Firdusi, author of the "Shah-nameh." The little shrine which till the beginning of the present century still marked the site of his tomb has since disappeared.

The towns lying on the northern slope of the mountains north of Meshed have hitherto been prevented from flourishing by the incessant border warfare with the

Fig. 41.—Tower of Meimandan on the Route from Damghan to Meshed.



Turkoman raiders. But since the pacification of this region by the reduction of the Tekkes, Mohammedabad, Lutfabad, and other places on the fertile slopes of the

Dereghez ("Tamarind Valley"), cannot fail to become important centres of trade between Persia and the Caspian basin. But how many ruined cities are shown over these productive regions, formerly cultivated by the industrious inhabitants of Margiana! From the spurs of the mountains projecting into the Tejen valley, the horizon appears in many places fringed with the countless remains of walls and ramparts quivering in the mirage. Here and there whole towns with their streets, squares, and citadels, have remained in almost as perfect a state of preservation as when they were first abandoned. But their only denizens are now the prowling leopard and jackal. One of these phantom cities is *Khivabad*, peopled by Nadir-Shah with captives from Khiva and Bokhara, but where no native would now dare to take up his abode. The Turkomans who cultivate the surrounding lands, all dwell in the plain of the Tejen, some 16 or 18 miles farther north. *Khusru-tepe*, or the "Hill of Khosroes," a much more ancient place, lying to the east of Lutfabad, is shunned in the same way, notwithstanding the efforts of the Khan of Dereghez to found a Turkoman settlement within its enclosures. Some of these places have had to be abandoned owing to the shifting of the rivers. Such was *Abiverd*, which still figures on most maps, although it has been long replaced by *Kahk*, towards which now flows the copious river Lain-su. Various ruins designated by the name of *Kailich*, *Kalisa*, or *Kalisi*, a term wrongly identified with *ecclesia*, or "church," are commonly supposed to attest the existence of ancient Nestorian communities in this region. But this word would appear in most cases to be simply the Persian *Kalasa*, a well, and especially the watering-places maintained at intervals in the desert, for the use of caravans and pilgrims to Mecca.*

A ruined tower near *Mohammedabad*, present capital of the Dereghez district, marks the site of the tent where was born the famous Turkoman conqueror, Nadir-Shah. He gives his name to *Kelat-i-Nadir*, or "The Castle of Nadir," which stands on the almost impregnable plateau commanding the Tejen valley, between Mohammedabad and Sarakhs. Kelat is the chief military station of the district, and here the Persian Government maintains a strong garrison. But the most jealously defended strategic point on the north-east frontier is the town of *Sarakhs*, which stands on the Heri-rud (Tejen) at its entrance to the Turkoman territory. Even more than Merv, Sarakhs may be regarded as the gate of India; for from this point access might be most easily obtained to the Herat valley between Persia and Afghanistan. Hence, according to MacGregor, Sarakhs must one day become the bulwark of British India or the point of attack for Russia. Its present population consists of Persian troops, Jewish traders, and a few Turkoman residents. The surrounding district is little cultivated, although it might easily be converted into a vast cornfield by means of irrigating canals from the Tejen, and by the water which is found everywhere by sinking wells to a depth of 18 or 20 feet.

South of Meshed the only town in the Henri-rud basin is *Turbat-Sheikh-i-Jami*, which lies on the Jam, near the Afghan frontier. *Turukh* and *Sherifabad*, situated farther west, derive some importance from their position at the junction of the pilgrim routes converging from the west, south, and east, on Meshed. In this

* A. H. Keane, in *Nature*, for Feb. 15, 1883.

district are the salt hills of Kafir-Kalah, whence the surrounding region derives its supplies. North-west of the Sherifabad Pass, that of Dahrud connects the Meshed with the Nishapur valley. Owing to the snows the ascent is difficult, and sometimes blocked altogether in winter. But from these uplands, which attain an elevation of probably 10,000 feet, the road leads south-westwards down to one of the most fertile and picturesque regions in the whole of Persia. Here the villages

Fig. 42.—Meshed and Kelat-i-Nadir.

Scale 1 : 1,200,000.

30 Miles.

disappear beneath the dense foliage of the fruit-trees, every valley has its splashing streams, waterfalls flash between the fissures of the rocks, the path winds amid flowery meads. Accustomed to the shifting dunes, sandy or saline wastes, and swamps of the Kevir, the traveller asks in amazement whether this can still be the same region of East Persia, elsewhere so arid and destitute of vegetation. *Nishapur*, the Nisaya or Nisoa blessed by Ormuzd, the birthplace of the Dionysos of Greek legend, one of the Iranian "paradises," and present capital of this district,

certainly offers far greater advantages than Meshed as the metropolis of East Iran. By Ibn Haukal it is mentioned with Herat, Merv, and Balkh, as one of the four capitals of Khorassan; and Yakut, who had traversed the whole Mohammedan world, could find no place worthy to be compared with it. Before the Mongol invasion it was described as the most flourishing and populous city in the world, and its destruction was spoken of as the greatest calamity that had ever befallen Islam. At present Nishapur is still a lifeless place, notwithstanding the fertility of the surrounding plains, which yield excellent fruits, cereals, cotton, and other produce. The Binalud hills, separating it from Meshed, abound in gold, silver, copper, tin, lead, and iron ores, besides saltpetre, marbles, and several varieties of choice malachite and turquoises.

Sebzewar occupies a narrow valley between two salt deserts west of Nishapur on the Teheran route. It is separated by a lofty range from the flourishing town of *Saltanabad*, which lies in a well-watered and productive district surrounded by extensive pasture-lands said to be occupied by some 8,000 Nomad Baluch families. Another commercial centre in this region is *Turbat-i-Hardari* (*Turbat-Isakhan*), which lies in a secluded mountain valley 4,500 feet above the sea, on the route between Meshed and Kirman. South-east of it is the town of *Khaf*, near the Afghan frontier, which derives some importance from its position as capital of the Taimuri Aimaks. Of the few noteworthy places in the arid and less populous region of Southern Khorassan, the most frequented by the caravans are *Bajistan*, lying to the south of Saltanabad, *Kakh*, famous for its embroidered silk fabrics, and *Tun*, former capital of the district of Tun and Tebbes. Tun, traditionally said at one time to have possessed "two thousand mosques and two thousand tanks," has been succeeded as the administrative centre by *Tebbes*, which is situated much farther west, almost in the midst of the wilderness, at one of the lowest points of the plateau. Although without industries and inhabited by a wretched fanatical population, Tebbes is important as the last station on the western verge of the hilly Khorassan region for caravans crossing the great desert in the direction of Yezd and Ispahan. Here the traveller finds at least pure water and a grateful shade, while the neighbouring district yields dates, tobacco, opium, and assafœtida for export.

Kain, ancient capital of Kain or Kuhistan, a region stretching from Tun eastwards to Afghanistan, lies on the confines of the wilderness, which in this direction reaches to Farah beyond the frontier. Kain, whose ramparts and 8,000 houses are mostly in ruins, has been succeeded by the present capital, *Birjand* (*Mihrjan*), one of the busiest places in East Persia. But the so-called "Birjand" carpets, famous throughout West Irania, are woven almost exclusively in the village of *Daraksh*, 50 miles to the north-east, by artisans originally from Herat. *Nih*, in the neighbourhood of Sistan, is noted for its copious hot springs, which, like fresh water, are drawn off to the underground galleries for irrigation purposes. But the neighbouring lead and copper mines, once extensively worked, are now abandoned. That this region was formerly far more civilised and prosperous than at present is also evident from the ruins scattered over Sistan, the ancient Sejestan, along the routes from Nih to the Hilmend. This birthplace of the legendary Rustem was mainly the scene

of the heroic history of Iran, and even since those remote epochs the Sistani have more than once influenced the destinies of Persia. *Nasirabad*, the present capital, lies nearly midway between the Hamun depression and the Hilmend. It had been preceded by *Sakuha*, whose citadel still crowns one of the three eminences whence this place takes the name of the "Three Hills." Here the fertile frontier district, watered by canals from the Hilmend, is defended by *Kalah-nau* ("New Castle"), one of the best-constructed and picturesque strongholds in Persia.

The north-west corner of Khorassan, comprising the valley of the Atrek, belongs to the Caspian basin. Near the low water-parting between the Atrek and Kashaf-rud lies the city of *Kabushan*, or *Kuchan*, at an elevation of 4,200 feet above sea level. Thanks to this position, it enjoys a mild climate, in which the grape ripens; but the district is exposed to violent earthquakes, by which Kuchan has been frequently laid in ruins. Nevertheless it is still a flourishing place, doing a large traffic in horses, wool, and agricultural produce. Owing to its position near the water-parting, it is also an important strategical place, where the Government maintains a garrison and permanent encampment. Two miles to the north-east is shown the hill where Nadir-Shah was killed while besieging the revolted city.

Farther down the Atrek valley follow the picturesque towns of *Shirwan* and *Bujnurd*, the latter lying on a southern affluent of the main stream, and noted for its delicate silk fabrics. West of this place there are no important towns either in the Atrek basin or in the Upper Gurgen valley, which are inhabited only by nomad populations. But the south-east corner of the Caspian, a position of great natural and historical importance, is occupied by *Astrabad*, at the converging-point of all the main routes between Iran and Turan. Astrabad also enjoys the local advantages derived from its fertile and well-watered surroundings, and its proximity to one of the least dangerous seaports of the Caspian. In this district the chief ethnical element is the Kajar Turkoman tribe, of which the present royal family of Persia is a member. The old palace of the khans in the centre of the town still serves as the residence of the provincial authorities; but Astrabad itself is a mere aggregate of hovels encircled by crumbling walls and infested by packs of jackals and half-savage dogs. Its industries are restricted to felt, carpets, and soap made of sesame oil; but the neighbouring districts, watered by the Kara-su and the Gurgen, yield abundant crops, pomegranates, and other fruits of prime quality. The outport for this produce is *Kenar-Gaz* (*Bandar-Gaz*, or simply *Gaz*), which lies some 24 miles west of Astrabad and south-east of the Russian island of Ashuradeh. From this place the Armenian traders export considerable quantities of cotton and boxwood from the neighbouring hills.

Besides its defensive works, the plain of Astrabad is studded with numerous sepulchral mounds and other structures, the most remarkable of which are those of *Gumish-tepe*, or the "Silver Hill," near the mouth of the Gurgen. Gumish-tepe, so-named from the silver coins often picked up among its débris, is regarded by the local population as the work of Alexander. In any case it forms a link in a series of important military works, being connected with the Karasuli mound by

the Kizil-Alan, or "Red Wall," which is continued as far as Bujnurd by a triple line of ramparts, indicated by a series of eminences along the water-parting between the Gurgen and Atrek. These earthworks, which during the Middle Ages served as the Persian line of defence against the formidable Yajuj and Majuj hordes, have a total length of over 300 miles. They run by the old city of Gurgen, terminating towards the Caspian in a number of causeways carried over the intervening marshes. Here the village of Gumish-tepe is one of the few permanent encampments of the Yomud Turkomans, who own about a hundred smacks, and

Fig. 43.—Kushan and Source of the Atrek.

Scale 1 : 1,800,000.

30 Miles.

capture enormous quantities of fish at the mouth of the Gurgen. From these they prepare the caviare which is exported to Russia by the local Armenian dealers.

West of Astrabad the Mazanderan seaboard contains no towns or structures of any size until we reach the famous palaces of *Ashref*, erected by Shah-Abbas on the slopes of a headland commanding an extensive view of Astrabad Bay and the Caspian. These edifices, built in separate blocks within a common enclosure, are in a ruinous state, having suffered much from the followers of the rebel Cossack Stephen Razin, from fires, and the ravages of time. Very few of the apartments

are still inhabitable; but the surrounding gardens and thickets are unrivalled in Persia for the wealth and variety of their vegetation. *Sari*, which lies farther west in the district watered by the Tejen, is also a decayed place, whose population has fallen from over 30,000 at the beginning of the century to little more than 7,000. Sari is a very old place, which D'Anville and Rennell have endeavoured to identify with the ancient Zadra-Karta, the largest city in Hyrcania, where the army of Alexander stopped to sacrifice to the gods. Feridun, the legendary hero of Persia, is supposed to lie buried under a mosque which stands on the site of a temple of fire, while a ruined tower in the vicinity is said to have formed part of the tomb of his two sons. Like Ashref, Sari is surrounded by a vast garden, and the neighbouring plains covered with mulberry, cotton, rice, and sugar plantations. Its outport on the Caspian is *Farah-abad*, at the mouth of the Tejen, whose inhabitants are chiefly occupied with fishing and the preparation of caviare. In the time of Pietro della Valle (1618), Farah-abad (Ferhabad), which Shah-Abbas had recently founded, was the chief city in Mazanderan, with several streets a league in length, and a superficial area equal to, if not greater than, that of Rome or Constantinople.

Barfrush (*Barferush* or *Bar-furuth*) is a much more modern place than the neighbouring Sari. Three centuries ago it was a mere village; but thanks to its healthy position and greater facilities of communication with Teheran over the Elburz Passes, it has gradually become the most important city of Persia on the Caspian seaboard. Its bazaar is one of the best stocked in the East, and its seaport of *Meshed-i-Ser*, at the mouth of the river Balul, is the busiest place along the whole coast, notwithstanding its difficult approaches. The staple export is raw cotton shipped by the Armenian traders in exchange for Russian wares. *Ali-abad*, lying south-east of Barfrush, is the agricultural centre of the surrounding sugar, cotton, and rice-growing districts. South-west of the same place is the small town of *Sheikh-Tabrisi*, memorable for the massacre of its Babi defenders, not one of whom survived.

Like Sari, *Amul* or *Amol* is an historic place, which in the time of Yacut ranked as the first city in Tabaristan, as Mazanderan was then called. And, although it has lost its famous carpet and cotton industries, Amul still remains the great mart for the agricultural produce of the whole region between Elburz and the Caspian. Here terminates the carriage road that has been constructed from the capital through the Lar valley, east of Demavend, down to the Mazanderan plains. From this point to the Sefid-rud Delta, a distance of some 150 miles, the strip of open country between the hills and the coast is too narrow for the development of any large centres of population. Towards its western extremity are the copious sulphur-springs known as *Ab-i-Germ*, or "Hot Waters," and farther on large quantities of hard asphalte are collected and worked into jewellery.

In the districts of Ghilan, east of the Sefid-rud, the chief places are *Lengherud* and *Lahijan*. *Resht*, the largest city in this province, lies west of the river in an unhealthy swampy district crossed by the main route from the plateaux to the "Dead Water," or Gulf of *Enzeli*. From this seaport Resht receives large

quantities of caviare, reed mats, and ornamental birds' feathers, and through the same place it exports raw silks, cocoons, carpets, and other local produce. The trade of Resht is chiefly in the hands of Russian Armenians and Jews, although Hindu Baniahs, and even Povindahs from Afghanistan, have been met in its streets, together with European merchants. In the neighbouring lagoon of the Murd-ab, or "Dead Water," over two million perch (*lucioperca*) have been taken in a year, and as many as 300,000 carp (*cyprinus cephallus*) in a single day. Enzeli, one of the worst anchorages in the Caspian, lies about 18 miles north-west of Resht, facing the bar over which the sea communicates with the shallow lagoon. The difficulties of transport across this lagoon and the dangerous roadstead are the great obstacles to the development of the local trade, which would be increased fourfold by the construction of a navigable canal connecting Resht with a good artificial seaport. But the commercial question is affected by political considerations, for the Persian Government naturally fears to excite the cupidity of Russia by fully developing the natural resources of the Caspian seaboard. Nevertheless, the time cannot be very remote when effect must be given to some of the numerous projects for connecting Resht with Teheran by a railway running from the Ghilan coast, through the Sefid-rud valley, up to the Iranian plateau. As soon as the Russian lines are connected with those of Trans-Caucasia, a further continuation of the system in the direction of Persia will become a primary necessity of international traffic.

At present the route from the coast to the interior does not follow the natural opening of the Sefid-rud valley, but ascends in abrupt inclines to the heights flanking its western edge. Here the town of *Rudbar*, or *Rudbar of the Olives*, as it is often called, covers a space of at least 3 miles in a plain thickly planted with fruit-trees, and especially with olives. The latter, which flourish in no other part of Persia, are employed chiefly in the manufacture of soap. Higher up the bridge of *Menjhil*, just below the confluence of the Shah-rud and Kizil-uzen, which unite to form the Sefid-rud, is taken as the limit of the two provinces of Ghilan and Irak-Ajemi. The southern approach of the routes, descending beyond the hills down to the Ashabad plains, is guarded by *Sharud*, whose position thus secures to it some strategic and commercial importance. Some 4 miles to the north is *Bostani*, which, like Shahrud, is surrounded by forests of apricot, fig, mulberry, and apple trees. On the neighbouring upland pastures are bred some of the finest horses in Persia. *Damghan*, lying to the south-west of Shahrud, and like that place one of the chief stations between Meshed and Teheran, was formerly a very large city, whose ruins still cover a vast space. But among them no traces have yet been discovered of ancient monuments, although Damghan (Damaghan) is usually identified with the old Parthian capital, to which the Greeks had given the title of *Hecatonpylos*, or the "City of the Hundred Gates." In any case Damghan shares with Shahrud the advantage of standing at the converging-point of numerous routes from the Elburz highlands and Iranian plateau. And if no ancient buildings are here found, tradition at least speaks of a "Silver City," said to have flourished in the neighbourhood. The prosperity of Damghan was due chiefly to the irrigating waters,

FORTRESS OF VERAMIN.

derived through underground galleries from the Elburz range, and Yacut describes as one of the finest monuments he had ever seen the reservoir supplying Damghan, the one hundred and twenty villages and tobacco-fields of the surrounding district.

Semnan, which lies also on the Teheran route, although strategically less important than the "City of the Hundred Gates," is equally populous, while its mosques, caravanserais, public baths, and other buildings are in a better state of repair. From this point to Teheran there is no other large town on the main highway, the vital importance of which is attested by numerous forts, artificial mounds, and other defensive works scattered along the route. In the popular belief, all the topes in this region are the remains of towers formerly raised by the fire-worshippers, hence still known as Ghebr-abad, or "Dwellings of the Ghebrs." Most of them have been used as entrenched camps, and the bonfires kindled on their summits often served to flash the tidings of warlike movements across the salt desert.

Of the ancient *Veramin*, whose name survives in that of the surrounding district, nothing now remains except a ruined fortress, a few country residences, and a fine mosque dating from the fourteenth century. Yet Veramin preceded Teheran as capital of Persia, and the neighbouring village of *Aiwan-i-Kaif* still guards the western approach to the pass, which by most historians has been identified as the famous "Caspian Gate."

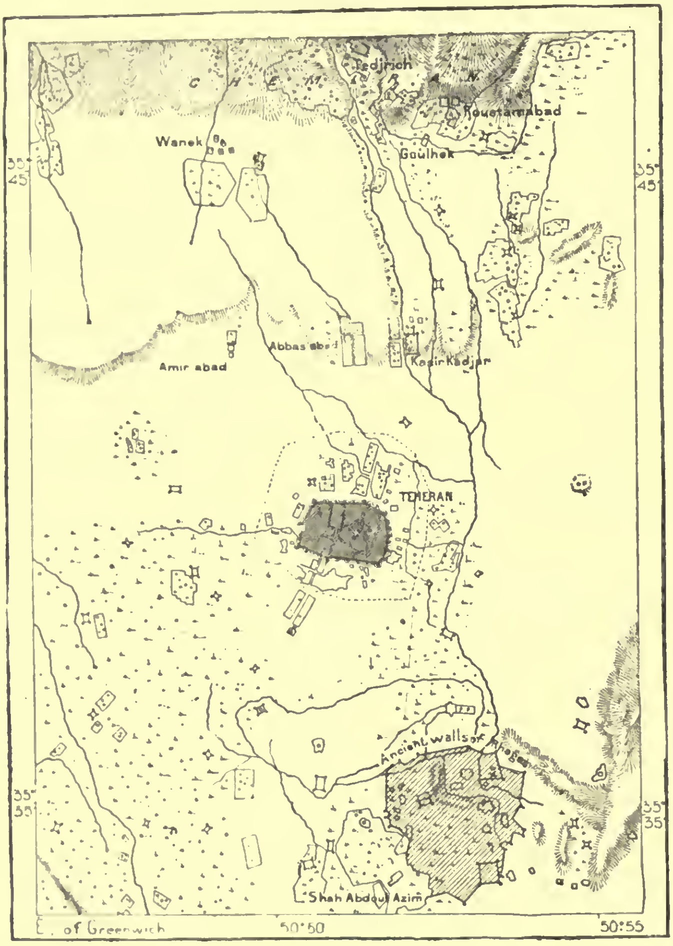
Teheran, the present capital of the Shah's dominions, although situated on the verge of the desert, does not occupy such an inconvenient geographical position as is generally supposed. It lies nearly in the centre of the great crescent formed by the Elburz range south of the Caspian, and it thus commands both the eastern and western provinces. It also communicates by easy passes over the Elburz range north-eastwards with Mazanderan and Astrabad, north-westwards with Ghilan, and over the older capitals, Shiraz and Ispahan, it possesses the further advantage of presenting a strategical front to Russia, that is, the power from whom Persia has most to fear. Lastly, standing at an altitude of 3,860 feet above the sea, it enjoys a relatively temperate climate with the convenience of cool, healthy retreats during summer on the southern slopes of the neighbouring Elburz Mountains.

Teheran, or rather Tihran, the "Pure," is a modern city, heir to the *Rhai* of the Arabs, which had itself succeeded the older capital, *Raghes*. The walls of Rhai, with a circumference of over 21 miles, are still visible in the plain stretching to the south of Teheran. But with the exception of two towers, nothing now remains within the enclosure, which has been converted into a cultivated tract, where the plough occasionally turns up a few gold and silver coins. Repeatedly captured and destroyed, Rhai never recovered from its overthrow by the Mongolians in the thirteenth century, when its surviving inhabitants were transferred to Teheran, which at that time was regarded as a northern dependence of the capital. But the religious sanctuary, as so often happens, continued to be maintained in the fallen city, which was traditionally said to be the birthplace of Zoroaster. An old suburb of Rhai, containing the tomb of the martyr Shah Abdul Azim, has become a small town of that name, with bazaars, baths, and shady avenues converging on the mosque containing the imam's shrine.

The present fortifications of Teheran, modelled on those of Paris, but built of a less durable material, already show numerous signs of decay, and although capable of resisting a local insurrection, they could offer no serious obstacle to modern artillery. A second enclosure has recently been planned and partly constructed, which is intended to include all the suburbs, thus doubling the official extent of the city, although the space contained within the old walls is still far from being built

Fig. 44.—Teheran.

Scale 1 : 225,000.



6 Miles.

over. The approach to Teheran presents no domes, towers, or other striking objects, but the gates with their fine pointed archways, columns, and elegant enamelled porcelain decorations, show that amid the general decadence the Persian race has at least preserved its artistic taste and originality. Within the walls two distinct influences are everywhere apparent: the old conservative spirit, and the mania for imitating everything European. The grand bazaar resembles those of other Eastern cities, while the neighbourhood of the palace is already laid out with

TEHERAN A

Enzeli
Bay of Mourdab
Pir-i-Bazar
RESHT
Sefid road
Foumen
Lahidjan
G H I L A N
Lengheroud
Kasimabad
Roustemabad
Khoramabad
Roudbar
S A M A N
Mendjhil
Takht i Souleiman
Shahroud
Fort Alamout
Siyalar
E L B O U R Z
M A Z A
Aliabad
C A S P I
Kazvin
Kishlak Sari
Abhur
Shehristanck
Mt Shemiran
Goulhek
Istarabad
TEHERAN
Ruins of Raghe (Rai)
Abdoulazim
Bahramabad
Ruins of
37
36
35
50° E. of Gr.
0 to 80 ft
80 to 320
0
15
Scal

DEMAVEND

640 to 1600 — 1600 & upwards

60 Miles

1:1,650,000

NEW YORK, D. APPLETON & Cº

shops and houses in the western taste. Elsewhere the whole place is mainly a labyrinth of narrow, crooked streets, obstructed by heaps of rubbish, full of deep ruts and pitfalls, cleansed only by dogs and jackals. Still the aristocratic quarters have their boulevard planted with trees, lighted by gas, and enlivened by elegant equipages. The neighbourhood, especially towards the north, is well irrigated by underground channels from the hills, and covered with cultivated fields and

Fig. 45.—Teheran—View taken on the Kasoni Route.

gardens. In summer the wealthy classes migrate in this direction towards the northern heights, which are covered with villages and country seats, known by the collective name of *Shemiran* or *Shimran*. Here the Court retires to the royal palace of Niaveran, and removes later on to the banks of the Lar at the foot of Demavend, some 6,000 feet above sea level. In this pleasant retreat both English and Russian embassies have a summer village, where the authority of the Queen and Czar is alone recognised. The inhabitants of *Gulhak*, the British village, being exempt

from taxation, are in a very prosperous state, and here is a little colony of Guebres largely employed as gardeners.

Teheran is now connected by a fine carriage-road, 90 miles long, with *Kasvin*, which was itself at one time a capital city, and which has again acquired some importance from the revival of trade between Persia and Caucasia. One of the chief stations on the same north-western route is *Sultanieh*, which preceded Ispahan as metropolis of the State, but which is now little more than a heap of ruins. Beyond it, in the same direction, lies *Zenjan*, the last town in Irak-Ajemi where Persian is still spoken. It is replaced on the northern side of the Kaflan-kuh range by Turki, which is the current speech of *Mianeh*, a wretched place on a head-stream of the Sefid-rud, dreaded by all travellers and infested by the *argas Persica*, a venomous insect whose bite, harmless to the natives, has occasionally proved fatal to strangers. Here died the illustrious French traveller Thévenot, in the year 1667. A little to the north-west lies the large village of *Turkmanchai*, celebrated for the treaty of 1828, by which Persia ceded to Russia the districts of Erivan and Nakhichevan, as well as the absolute possession of the Caspian Sea.

Tabriz (*Tebriz*, *Tauris*), capital of Azerbeijan, and till recently the most populous city in Persia, is the ancient Kandsag of the Armenians, which was founded at the end of the fourth century of the new era. It lies in the basin of Lake Urmiah, in the middle of a plain dominated southwards by the lofty Sehend volcano. The city is surrounded by thousands of well-watered gardens; and although the enclosures are scarcely 11 miles in circumference, it was described in 1675 by Chardin as one of the great cities of the world, with 300 caravanserais, 230 mosques, a bazaar containing 15,000 stalls, and a total population of 550,000. But since then it has been wasted, not only by fire and the sword, but also by five disastrous earthquakes, by which 70,000 persons are said to have perished in 1727 and 40,000 in 1780. To these causes is due the scarcity of fine monuments, notwithstanding the antiquity of Tabriz, the wealth of its merchants, the power and influence of its former rulers, the great beauty of the marbles, porphyries, lavas, and other materials available for building purposes. The citadel, a massive quadrangle 80 feet high, is the most imposing structure, since the almost total destruction in 1780 of the famous "Blue Mosque," a marvel of Eastern architecture and decorative art, of which nothing now remains except a few broken shafts and the fragments of a gateway.

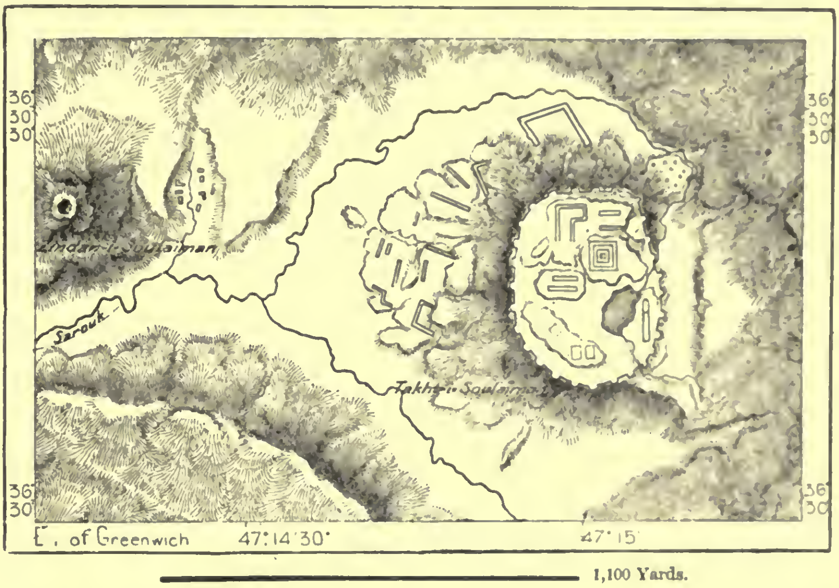
The commercial importance of Tabriz, combined with its vicinity to the Russian frontier, has caused it to be chosen as the residence of the heir to the throne. Lying at the north-west corner of the empire, near the Russian and Turkish frontiers, it has naturally become a great international entrepôt, where Armenian and even European traders have settled in considerable numbers. The foreign exchanges were estimated by Frazer at about £1,000,000 in 1832, and the vast bazaar is always well stocked with English, Russian, and other European wares. Although very cold in winter, the surrounding district yields all the produce of the temperate zone, including almonds, apricots, and other fruits of prime quality. The baths of *Lala*, near the flourishing village of *Sirdarud*, are much frequented by the inhabitants,

who also resort in summer to the shady villages and mineral waters of the Sehend slopes.

Ahar, lying in the Araxis valley to the north-east of Tabriz, is noted chiefly for its rich iron mines, while equally productive copper mines are found in the neighbourhood of *Ardebil*, which is situated in the same basin close to the Russian frontier. North of this place, on the route to Caucasia, lies the ancient city of *Marand*, where the tomb of Noah's wife is shown by Christians and Mohammedans alike. West of it lies the fortified town of *Khoi*, close to the Turkish frontier, noted especially for its mulberries. On the main route running from Khoi north-westwards to Erzerum and Trebizond, the only noteworthy place within the Persian

Fig. 46.—Takht-i-Sulaiman.

Scale 1 : 18,000.



frontier is *Maku*, which stands at the foot of a hill pierced by a yawning cavern over 600 feet broad.

Another grotto, traditionally said to have been occupied by Zoroaster, is found near the city of *Urmiah* (Urmij), which lies in a highly-cultivated and thickly-peopled plain sloping down to the great lake of like name. From the station of *Seir*, founded by the American missionaries in 1831, a delightful view is commanded of this wooded plain with its "three hundred villages," inhabited chiefly by Nestorian Chaldeans, amongst whom Protestantism has made considerable progress in recent years. All these frontier towns carry on a large contraband trade across the borders with the adjacent Russian and Turkish provinces.

Maragha, which is pleasantly situated on the southern slopes of Sehend, was famous in mediæval times for its scientific establishments. Here lived during the second half of the thirteenth century the famous astronomer Nassir-Eddin, for whom the Mongol khan Hulagu built an observatory, which soon attracted students

from all quarters. South-west of this point formerly stood a flourishing city, whose ruins still encircle the lakelet of *Takht-i-Sulaiman.* Here are the remains of a great fire-temple, which, with the neighbouring buildings, have been identified by Rawlinson with the ruins of the Median capital *Ecbatana.* A modern legend has converted this place into the "Throne of Solomon," and in the north-east another hill is known as the *Takht-i-Balkhis,* where the Queen of Saba is supposed to have

Fig. 47.—Hamadan and Mount Elvend.

Scale 1 : 540,000.

12 Miles.

reigned. In this district are some cuneïform inscriptions, and an "inscribed stone" invoked by the Kurds as a sort of living magician.

Hamadan, the ancient Ecbatana or Agbatana, and the Hagmatana of the cuneiform inscriptions, appears at the very dawn of history as already a great city. As the capital of an empire it was favourably situated at a time when the centre of gravity of Irania was moving westwards. Lying about midway between the Caspian and Persian Gulf, on the very border of the Median and Persian frontiers, it commanded the water-parting of the two basins, and all the passes leading over the border range into Mesopotamia and Babylonia. But of the ancient Ecbatana nothing now remains except heaps of ruins, amid which archæologists seek in vain

for the site of the famous citadel where the Median sovereigns deposited their treasures, and where Alexander accumulated such prodigious quantities of plunder. Nevertheless the past greatness of Ecbatana is still recalled by the Takht-Ardeshir, or "Throne of Artaxerxes," a terraced eminence near the hill which was formerly crowned by the central fortifications. Not far from the city are seen the remains of a lion carved out of a resonant block, and by the inhabitants regarded as a supernatural guardian of the city against cold and famine. A comparatively modern cupola is also held in great honour by the local Jews, who believe it to be the shrine of Esther and Mordecai. The Jewish community at Hamadan is the largest in Persia, comprising as many as one thousand families, but living in great misery.

Fig. 48.—The Resonant Lion of Hamadan.

"Beaten, despised, and oppressed, cursed even by slaves and children, they yet manage to exist, earning their living as musicians, dancers, singers, jewellers, silver and gold smiths, midwives, makers and sellers of wines and spirits. When anything very filthy is to be done a Jew is sent for."* The celebrated Bokhariot physician Avicenna (Ibn Sina) lies buried in Hamadan. An abundance of good water is obtained from the springs and wells sunk to depths of over 300 feet at the foot of Elvend. But the proximity of this snowy peak, combined with the great altitude of the place (5,000 feet above sea level), and its northern aspect, render its climate excessively cold in winter. In summer, however, it is one of the most

* Dr. C. J. Wills, "The Land of the Lion and Sun," page 74.

agreeable residences in Persia, and the neighbouring vineyards yield an excellent red wine like Bordeaux, and a white compared by Bellew with Moselle. Except leather-dressing, harness-making, carpet-weaving and dyeing, there are no local industries, but a considerable trade is carried on with Mesopotamia, and the bazaars are well supplied with wares of all kinds. Hamadan may be regarded as the capital of the western Turkomans, whose camping-grounds are dotted over the surrounding plains and valleys.

East of these pasture-lands, and on the very skirt of the desert, stands the holy city of *Kum* (*Kom*), whose gilded dome surmounts the shrine of Fatima, sister of the imam Reza. Hither the Persian women flock in thousands to obtain fecundity, domestic happiness, and beauty. Round about the central shrine are scattered "four hundred and forty-four" tombs of lesser saints, beyond which stretches a vast necropolis, occupied by the faithful who have had the happiness to die or be transported after death to the holy city. Next to Meshed, Kum ranks as the most venerated place of pilgrimage in Persia, although its reputation seems to have somewhat waned since the time of Chardin. Its trade and industries have also fallen off, and it is now little more than a vast ruin, resembling a city of the dead rather than the abode of the living.

Kashan, on the contrary, which occupies a central position in Irak-Ajemi, on the great highway between Teheran and Ispahan, is a very flourishing place, supplied with good water from the neighbouring hills, and surrounded by productive gardens, orchards, and cultivated tracts. But Kashan is chiefly famous as an industrial centre. Here has been preserved the art of decorating mural surfaces with painted mosaics, and here are produced the finest velvets and brocades in Persia, besides porcelain, jewellery, cloth of gold and silver, and other costly wares. From its position Kashan promises to become the centre of the future railway system of Persia. It already possesses the finest highways, next to those of Teheran, and some of the sumptuous caravanserais along these routes are maintained with the same care as in the days of their founder, Shah Abbas. From the same period dates the Band-i-Kuh-rud, or "Dyke of the Mountain Torrent," one of the grandest works of general utility in Persia.

The caravan road running from Hamadan directly to Ispahan along the eastern foot of the border ranges is much less frequented than the main route from Teheran through Kashan to Ispahan. Till recently it was infested by the Bakhtyari marauders, who were kept in awe by the stronghold of *Sultanabad*, itself a mere collection of wretched hovels, but the centre of one of the great carpet-weaving districts of Persia. The neighbouring hills yield an abundant supply of manna (*geizingebin*), a sweet substance secreted by a worm which lives on the foliage of a species of tamarind. On the route running from Sultanabad south-eastwards to Ispahan follow the towns of *Khumein*, surrounded by vast ruins; *Gulpaigan*, still supplied with water by a kanot excavated under Harun-ar-Rashid; *Khonsar*, straggling for a space of 6 miles along both sides of the road; *Tihran* and *Nejefabad*, with their cotton and tobacco plantations, beyond which a magnificent avenue of plane-trees leads to the historic city of *Ispahan*.

HAMADAN—RUINED MOSQUE OF THE FOURTEENTH CENTURY.

But Ispahan (Isfahan, Isfahun) is no longer "Half of the World," as it was formerly styled, in allusion to its superb edifices, teeming industries, and lovely surroundings. Most of the space within the enclosures, some 22 miles in circumference, is uninhabited, and the fox and jackal have their dens amid the ruins of its finest palaces, mosques, and bazaars. Yet Ispahan recovered from the blow inflicted on it by Tamerlane, who raised a pyramid of 70,000 heads of its slaughtered citizens, and in the seventeenth century it again became one of the great cities of the world during the reign of Shah Abbas. At that time it contained over 32,000 houses, with a population variously estimated from 600,000 to 1,100,000, including the suburbs. In this entrepôt of the Central Asiatic trade the great houses of England and Holland had their agents, and the Armenians possessed rich factories in the suburb of Julfa, so named from the ruined city on the banks of the Arras.

Fig. 49.—Ispahan and Environs.
Scale 1 : 1,100,000.

The local industries were unrivalled throughout Irania, and the taste and skill of the native artists are still attested by the buildings dating from that period. But Ispahan was completely ruined by the subsequent disasters attending its siege and capture by the Afghans, the protracted civil wars of the eighteenth century, and the displacement of the capital on the accession of the Kajar dynasty. Yet although the slow work of revival has been frequently interrupted by famine, its bazaars are again beginning to show signs of renewed trade, while its numerous looms continue to produce cottons, silks, and carpets in large quantities. Nor has its wealthy corporation of painters greatly degenerated since the time when thousands of artists were employed in decorating the palaces of Shah Abbas. But it must be confessed that the modern art of Ispahan is less pure, less elegant and noble than that of the Seljuk and Mongol epochs from the eleventh to the thirteenth

century. Most of the pleasure-grounds have been changed to plantations or kitchen-gardens, and the running waters, formerly distributed in fountains and other ornamental works, are now confined to irrigating canals in the midst of vegetable and tobacco fields. But the superb avenue, nearly 3 miles long, leading to the Zendeh-rud, or "River of Life," and crossing it with a noble bridge of thirty-four arches surmounted by an open gallery, still survives as the chief glory of Ispahan. This bridge connects the city with the suburb of Julfa, which is still inhabited by the descendants of the Armenians who migrated hither early in the seventeenth century. In this metropolis of the orthodox Armenians of Persia, India, and the extreme East, they number not more than six hundred families; but in the Feridun valley, to the north-west, several villages are exclusively occupied by Armenians. Some of these communities, originally from Georgia, have embraced the Mohammedan religion, but continue to speak the Georgian language. Ispahan is also the chief centre of the Jewish nationality in Persia. Here the Jews are more numerous than in any other city except Hamadan, and in the bazaar hundreds of stalls belong to them.

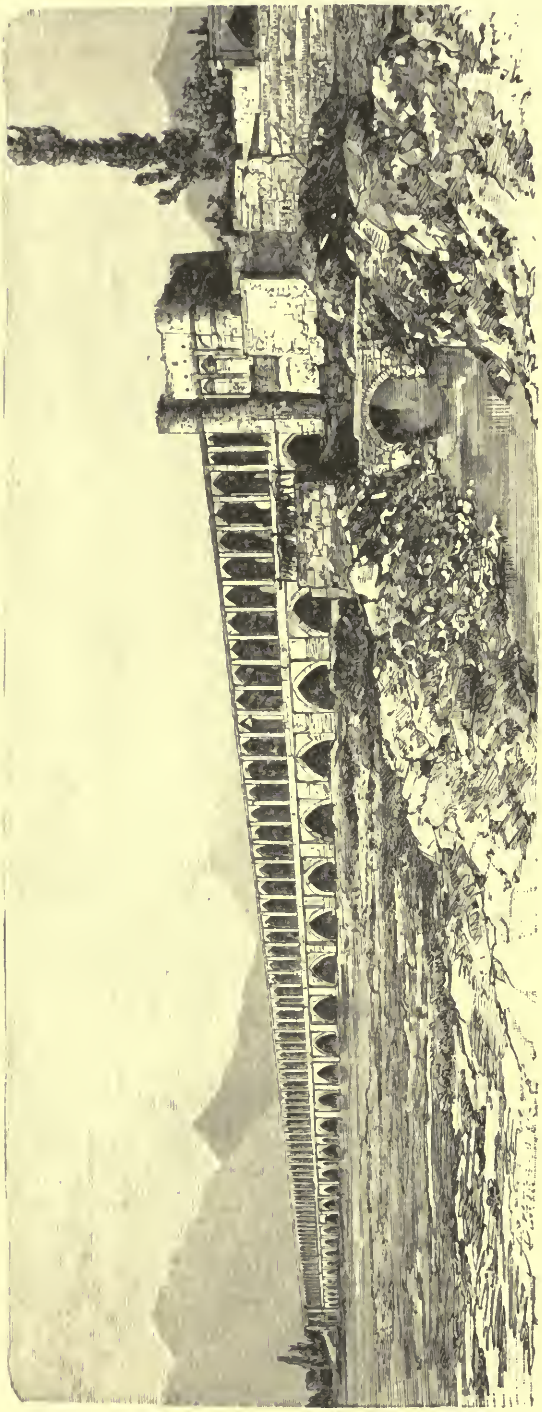


Fig. 50.—Ispahan—Bridge over the Zendeh-rud

The district of Ispahan is one of the best watered and most productive on the Iranian plateau. Standing at an elevation of 4,750 feet, it enjoys a temperate climate suitable for the cultivation

of sub-tropical plants, and here are successfully grown tobacco, opium, cotton, wine, vegetables of all sorts, and especially melons, said to be the best in Persia. Amid the cultivated grounds are scattered numerous ruins, hamlets, shrines, and picturesque pigeon-towers circular in form, from 20 to 27 feet high and sometimes 60 feet in diameter. Dr. Wills tells us that he has counted cells for seven thousand one hundred pairs in a single tower, but that most of those near Ispahan are now in ruins. Amongst the mosques of the neighbourhood the most remarkable is that of *Koladun*, noted for its two "shaking minarets," whose vibratory motion is attributed by the natives to the virtue of a saint buried under the intervening dome. But it is really caused by the wooden frame to which are attached the lightly-constructed towers, which are thus made to turn easily on an inner axis. A similar phenomenon is observed in a mosque at Bostam.*

Although smaller than Ispahan, *Shiraz* is the capital of Farsistan, that is, of Persia in a pre-eminent sense, and its inhabitants are almost exclusively of Iranian stock. Shiraz is, moreover, the heir to the imperial capitals which succeeded each other in this region, and one of which was the world-famed Persepolis. Renowned for their wit, intelligence, and purity of speech, the Shirazi regard themselves as the representatives of the national culture, and impatiently submit to the sway of the Turkoman Kajar dynasty. Bab Ali-Mohammed, whose vaticinations endangered that dynasty, was a native of Shiraz, and in this place were gathered his first followers. In order to curb the unruly spirit of the people of Fars, the Persian Government garrisons their towns with Turki troops, national animosity thus helping to keep them in subjection.

If less shady, the vegetation of Shiraz presents a more southern aspect than that of Ispahan. Descending to the plain by the Persepolis route, or from the north-east, the traveller is suddenly arrested by the sight of the city with its avenues of cypresses, pleasant gardens, and glittering domes, enclosed by a background of snowy mountains. Although still at an altitude of 4,500 feet, Shiraz, compared with those of the plateau, is already a southern city, and for the Iranians here begins the region of "hot lands." The transition from one zone to the other is indicated by the palm-trees dotted over the plain. While Ispahan lies on the eastern slope of the border ranges, Shiraz is situated in the Cœlo-Persis, or "Hollow Persia," of the ancients, that is, in one of the intermediate depressions between two parallel chains of the system, and its waters flow to a small basin with no seaward outlet. Towards the Persian Gulf it is completely defended by the regularly-disposed crests of the Tengsir, which might be easily held by a few regiments of resolute troops. But however favoured in many respects, Shiraz has many disadvantages, amongst which the most serious are a malarious climate in summer and frequent earthquakes of a violent character. In that of 1855 half the houses were overthrown, and ten thousand persons buried beneath their ruins.

Shiraz is at present little more than a large village, with a circuit of less than 4 miles, and no conspicuous buildings except its mosques. Its industries are restricted to jewellery, chiefly carried on by the Jews, exquisite marqueterie work

* J. Dieulafoy, "Tour du Monde," 1883.

in wood and ivory, rosewater of prime quality, and some trade. The local wine is bad, and even the nectar so lauded by the native poets, which comes from a district 30 miles off, is a heady perfumed drink at first disagreeable to the European palate. A small export trade is supported by the tobacco and other produce of the district; but as a station for goods in transit Shiraz occupies an exceptional position at the converging-point of the routes from the Persian Gulf. Unfortu-

Fig. 51.—Shiraz and Persepolis.

Scale 1 : 750,000.

12 Miles.

nately all these routes are difficult and in bad repair, so that traders show a preference for other roads, such as those of Kermanshah and Tabriz.

Of the three most famous Persian poets, Hafiz, Sadi, and Firdusi, the first two were natives of Shiraz, through which no Persian passes without visiting their tombs. On the marble slab which for five hundred years has covered the remains of Hafiz are inscribed two of his odes in gold letters. Near it was buried Rich, the famous explorer of Kurdistan. The monument of Sadi, author of the "Gulistan," lies farther off, near the village of *Sadiyeh*, so named from this delightful poet,

than whom "no nightingale ever warbled sweeter notes in the garden of knowledge." Near the tomb is a yawning chasm of artificial origin over 670 feet deep.

The learned are unanimous in fixing the site of the ancient *Persepolis* and *Istakhr,* which lies on the Ispahan route some 30 miles north-east of Shiraz. Here begins a chain of grey marble hills, which is continued south-eastwards along the now marshy Merv-Dasht plain, through which the Band-Emir winds its way to Lake Neris. A dam surmounted by a bridge of thirteen arches retains the waters of this river, deflecting them to the innumerable channels of the plain, above which rise the three isolated rocks of Istakhr. Here stood the famous city of Persepolis, where is still to be seen the finest ruin in Persia, a group of walls and columns locally known as the "Throne of Jemshid." From the cuneiform inscriptions engraved on the walls it appears that of the six palaces the largest was that of Xerxes, "king of kings, son of King Darius, the Achemenide." But to judge from the unfinished state of the carvings and inscriptions, the builder would seem to have left his work incomplete. According to tradition it was destroyed by fire, no traces of which, however, can be detected on the marble surface, smoother and clearer, said Herbert in the seventeenth century, than any steel mirror. The faces of the winged bulls and all representations of the human figure have been effaced by Mohammedan iconoclasts, and although walls have also been overthrown and columns broken by the hand of time, the building still presents an imposing appearance. The square terrace on which it stands is still approached by a double flight of black marble steps, but of the seventy-two original shafts twelve only now survive with their capitals. Some of the sculptures and many details suggest Egyptian influences; but the graceful elegance of the whole attests the close relationship which at that time existed between Persian and Greek art. The architects of the palace of Xerxes had certainly seen the Hellenic temples of Ionia and the monuments of Lydia. At the foot of the neighbouring Naksh-i-Rustem hill are several bas-reliefs representing various events of the Sassanides dynasty. Of these the most remarkable is that of King Sapor generously extending his hand to the vanquished Emperor Valerian.

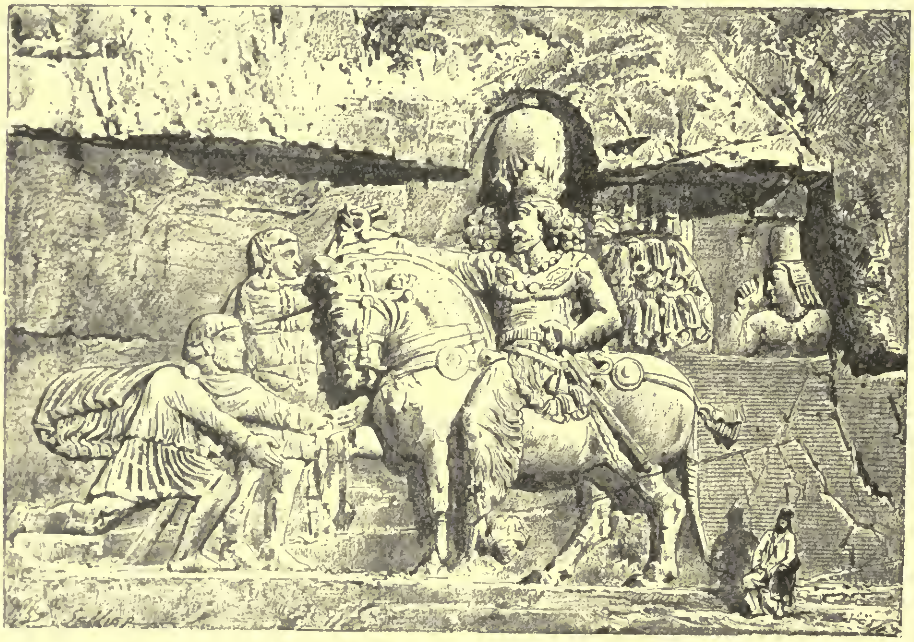
According to most archæologists the tomb of Cyrus lies near the village of *Meshed-i-Murghab,* some 36 miles north-east of Persepolis. On this spot a large city certainly stood in the time of that monarch, whose image is carved on a pillar with the legend, "I Cyrus, king, the Achemenide!" A tomb, said by the natives to be that of Solomon's mother, and now bearing an Arabic inscription, is supposed by most travellers to be the monument of Cyrus, although it is still doubtful whether the plain of Meshed-i-Murghab be the ancient *Pasargades,* with which most archæologists have till recently identified it; for the inscription places this holy city much farther east in the province of Kirman, and not in an open plain but on the top of a hill.

Darab (Darabjerd), lying 120 miles south-east of Shiraz, near the source of a stream flowing intermittently to the Persian Gulf, has also been identified with Pasargades, although no remains associated with the name of Cyrus have been found there. Nevertheless it is a very old place, and Firdusi makes it the scene

of many events in his mythical epic poem. Its name is said to mean "Enclosure of Darab or Darius," and a neighbouring rock is embellished with a bas-relief of Valerian at the feet of Sapor, a subject which is met in so many other parts of Persia. Another ancient monument in the vicinity of Darab is an underground rock-temple with smooth walls unadorned by any carvings or statues. North of Darab lies the town of *Niris*, which gives its name to the largest lake in Farsistan, and which was recently one of the chief centres of the Babist sect.

In Northern Farsistan, that is, on the plateau beyond the hilly district, the only large towns are *Ababdeh*, midway between Shiraz and Ispahan, and *Kumisheh*, 60 miles nearer to the latter place. Ababdeh is noted for wood-carvings, boxes, desks, chessmen, and the like, which compete even in North Persia with similar

Fig. 52.—Valerian at the Feet of Sapor—Bas-relief of the Royal Tombs at Naksh-i-Rustem, near Persepolis.



objects imported from Europe. North-west of Ababdeh an isolated crag is crowned with the almost inaccessible stronghold of *Yezdikhast*, which can be approached only by an old drawbridge. In the hilly region skirting the desert between Kashan and Yezd the most important places are *Nain*, a chief centre of the pottery industry, *Kupa*, one of the most flourishing towns on the plateau, *Agda*, *Ardakan*, and *Maibut*.

Yezd, which communicates with the rest of Persia only by caravan routes across the rocky or sandy plateaux, is a city of the desert, whose oasis, planted chiefly with mulberries, is everywhere surrounded by the wilderness. At some points the moving sands reach the very gates of the city, threatening to swallow up whole quarters, just as they have already destroyed the first city of Yezd,

called also *Askizar*, whose ruins are still visible on the route to Kashan, 10 miles to the north-west. But notwithstanding its isolated position on the plateau near the geometrical centre of Persia, Yezd is still a flourishing place, with numerous silk-weaving, spinning, dyeing, and other industries. The cocoons supplied by the surrounding oasis are insufficient for the local factories, and raw silk has to be imported from Ghilan, Khorassan, and even Herat. A large export trade is carried on beyond the frontiers with Mecca and other Arab cities, through Mascat, and even indirectly with China, to which a yearly increasing quantity of opium is forwarded. This trade is almost entirely in the hands of a Guebre community, one of whose wealthy merchants owns as many as one thousand camels. The local population consists largely of Seyids, who claim descent from the prophet, and Yezd has been called the "City of Worship," a title which the inhabitants endeavour to justify by their extreme intolerance towards their Parsi brethren.

Along the south-eastern caravan route no towns or even villages occur till we reach *Bahramabad*, which is distant 120 miles from Yezd, and which owes its prosperity to its position in a fertile district at the junction of several highways. Opium and cotton are cultivated in the neighbourhood, and farther north some rich lead mines are worked near *Baghabad* on the northern slope of the Nugat hills.

Kirman, or *Kerman*, capital of one of the great provinces of Persia, has preserved the name of the Carmanes or Germanes mentioned by the old writers; but, like Yezd, it has shifted its position. The remains of a vast city stretch away to the south; other ruins are visible towards the west, while on the north side the suburb occupied by the Guebres was almost entirely destroyed at the end of the last century. The present Kirman fills an irregular square enclosure about 1,200 yards on all sides at the western foot of an eminence crowned by a ruined citadel. Standing at an elevation of over 6,500 feet, its climate is thoroughly continental—very cold in winter, oppressively hot in summer. The 12,000 Guebre families formerly settled in the district have been reduced by persecution and compulsory conversions to a small community of scarcely 1,500 souls. Kirman has also lost the reputation which it enjoyed in the time of Marco Polo for the manufacture of arms; but it still continues to produce fine embroidery work and carpets, besides shawls, inferior in softness to those of Kashmir, but fully equal to them in delicacy of texture and design. In their preparation use is made of *kark*, or the down of goats, and this kark is exported to Amritsar, where it is mixed with the *pashm* of Tibet in manufacturing the fabrics for which that place is famous.

Kirman is the last station in the south-east to which the European postal system extends. Beyond this point the venturesome traveller, passing from oasis to oasis, is excluded from all communication with the civilised world until he reaches the Baluchistan coast. The population itself consists almost exclusively of Baluch nomads, whose "towns" are merely places of refuge against marauders. Yet there is no lack of fertile tracts in the valleys, which Marco Polo found covered with towns, villages, and pleasure-houses. Some of the slopes even still present the spectacle, now rare in Persia, of extensive woodlands, and towards the south-east occur some really picturesque spots, such as the district surrounding the fine

mosque of *Mahan* (*Mahun*), and that of *Rayin* (*Rayum*), a large village lying in the midst of vineyards and walnut-groves.

The largest place in east Kirman is *Bam*, which, like so many other Persian towns, has shifted its site in recent times. It lies within the Germsir or "hot zone," the oranges, citrons, and palms of the surrounding oasis imparting to it a southern aspect. But the desert soon resumes its sway, and from the station of *Rigan* to *Bampur*, for a distance of about 120 miles, many ruins but no inhabited houses are met. Bampur itself, although the capital of Persian Baluchistan, is a mere group of about a hundred thatched huts crowded together at the foot of an artificial eminence crowned by a crumbling citadel. Here are neither baths, school, nor mosque, scarcely even any cultivated lands, although the surrounding plain is very fertile and well watered by the river Bampur.

Bampur is still distant 180 miles from the station of *Meshkid*, through which runs the official frontier between Persia and the territory of the Khan of Kalat. But in the whole of this extensive region there are no towns, or even hamlets, beyond a few camping-grounds and forts, and even of these many are in ruins. *Jalk*, the "Desolate," which figures on the maps as the capital of a vast district, is merely a group of fortlets surrounded by cultivated ground and date-groves. On the western portion of the Mekran coast, politically included in Persia, the open ports of *Khobar* (Chaobar) and *Jask* have acquired some importance as stations of the telegraph system connecting London with Calcutta through Caucasia and Persia.

Topography of South-west Irania.

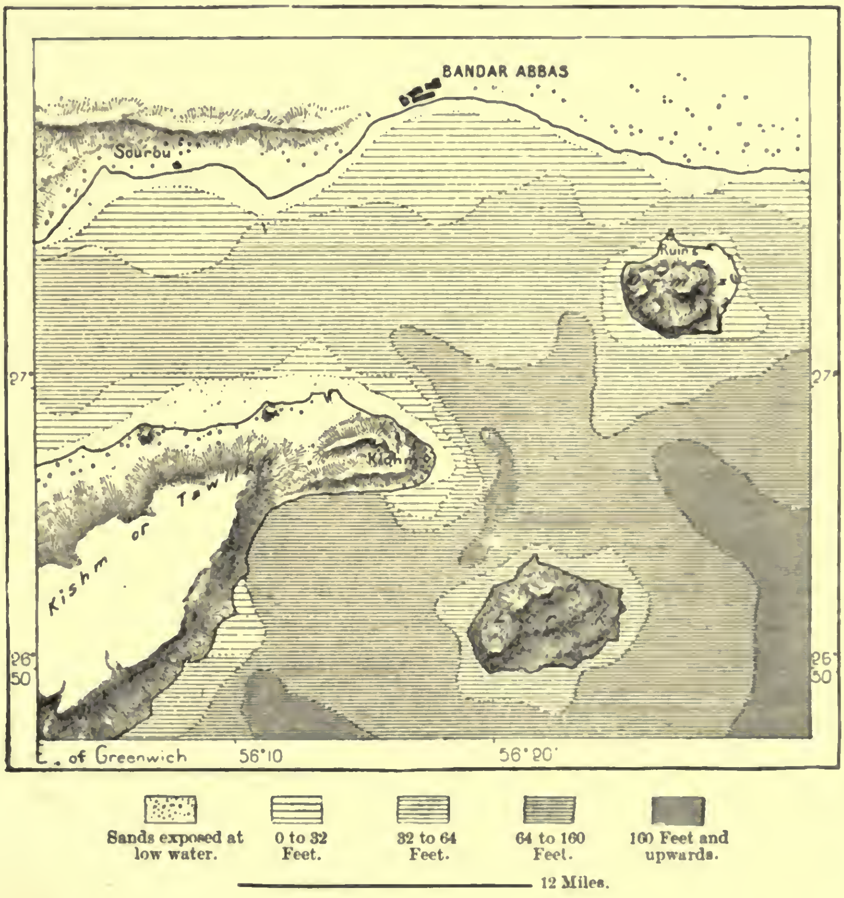
At the headland of Ras-el-Kuh, 30 miles west of Jask, the coast-line trends northwards parallel with the Arabian peninsula of Cape Masandam, with which it forms the straits of Ormuz, connecting the Persian Gulf with the Sea of Oman. Here is situated the once famous port of *Gambrun*, or *Komron*, since the time of Shah Abbas known as *Bandar-Abbas*, where was formerly concentrated the whole foreign trade of Persia. But its relative importance has been much diminished, partly by the difficulty of the routes leading over the intervening highlands to Shiraz, partly by the excessive heat and unhealthy climate of the seaboard, but especially by the displacement of the capital northwards. Shiraz now communicates with the rest of the world through Bushir; Ispahan and Hamadan transact their business chiefly overland with Bagdad, and the whole of northern Persia effects its exchanges with Europe through Tabriz or Enzeli. Thus the trade of Bandar-Abbas is now restricted mainly to Yezd and Kirman. Its so-called port is merely an open roadstead partly sheltered by the islands of Kishm, Larek, and Ormuz, and affording anchorage in 7 fathoms of water within a mile and a half of the coast. It is regularly visited by steamers, which take in cargoes of opium, dates, fish, the silks of Yezd, and carpets from Kirman. During the sultry summer heats, all who are not compelled to remain in the town retire to the neighbouring village of *Suru*, or to the large oasis of *Minab*, some 50 miles farther east, noted

BANDAR—ABBAS.

for its excellent dates, mangoes, pomegranates, almonds, oranges, and other fruits. Minab and the surrounding district of Maghistan do a considerable export trade in dates, cotton, and henneh through Bandar-Abbas, whose exchanges amounted in 1877 to a total value of £514,000.

In the time of Marco Polo the city of *Hormos*, or *Ormuz*, then situated on the mainland, was the centre of a vast trade with every part of the East, receiving, especially from India, rich cargoes of spices, precious stones, pearls, ivory, silks, and cloth of gold. The site of the old city, still partly covered with ruins, has been

Fig. 53.—Ormuz and Bandar-Abbas.
Scale 1 : 500,000.



discovered on the banks of the Minab some 6 miles south-west of the fort now standing in the centre of the oasis. After its destruction by the Mongols, Ormuz was rebuilt on a little island of almost circular form within 4 miles of the coast. It was captured by Albuquerque at the beginning of the sixteenth century, and soon became a great mart for the trade of the Portuguese with the East. The city stood on the side of the island facing the mainland, where is still found a little village with a Portuguese fortress in a good state of repair. Palaces and churches were scattered over the island, whose highest summit (650 feet) was crowned by

the chapel of Nostra Senhora de la Penha. Now the place exports nothing but some salt-fish, ochre, and salt, collected after the rains from the salt-hills of the interior.

The large island of Kishm, or Tawilah, which stretches west of Ormuz parallel with the Persian coast, seems to have at one time formed part of the mainland, from which it is separated only by a navigable channel from 2 to 6 miles wide, 60 long, and nowhere less than 20 feet deep. There is good anchorage at Left, in the middle of the channel; but notwithstanding its excellent position between two seas, and close to Arabia and Persia, this rocky and arid island exports nothing except some fruits, salt, and sulphur. At its western extremity the English founded the military station of *Basidah* (*Bassadore*), to command the entrance of the Persian Gulf; but the place had to be abandoned owing to the want of water and the intolerable summer heats. During this season most of the natives themselves seek a refuge amid the groves of Minab, and the sulphur and salt mines are worked by the Arabs only for five months in the year.

Henjam, which is separated by a channel 1½ mile wide from the southern point of Kishm, had also been designated as a future station of the British navy; but the project had to be given up for the same reasons that led to the abandonment of Kishm. Yet this island was at one time densely peopled. Thousands of stone houses, besides numerous cisterns faced with an indestructible cement, are scattered over the depressions, while the remains of cultivated terrace-lands are still visible on the slopes. At the northern extremity stand the ruins of a large city with two mosques. But at present the population is reduced to two hundred Arab families, originally from Sharjah on the Oman coast, now occupied chiefly with the pearl fishery off the south side. In the interior the rocks consist largely of salt, streaked in yellow, red, and green by the presence of foreign elements.

Linjah, the first station for steamers entering the Persian Gulf, is a straggling village 2 or 3 miles long, commanded on the north by a hill 4,000 feet high. The anchorage is better than at Bandar-Abbas, and the port owns about one hundred and fifty craft, some of which are engaged in the pearl fishery. West of Linjah the village of *Charak* marks the site of *Siraf*, a large and flourishing place in the ninth century. But it lost all its trade after its capture by the Arab chief of *Kais*, a small island 20 miles to the south-west, which gradually became the centre of the trade and shipping of the Persian Gulf. The ruins of a large Arab city are still visible on the north side of Kais, where the English founded a now abandoned military station in the present century. Beyond Charak the small harbours of *Bandar-Nakhl*, *Bandar-Bisaitin*, and *Bandar-Kongun*, are visited only by Arab fishing-smacks.

The south-western seaboard of Persia is known only through the reports of travellers who have traversed one or other of the routes between Shiraz and Bandar-Abbas. The northern route, crossing at considerable elevations the crests of the transverse ridges, passes through *Darab*, *Forg*, and *Tarun*, while the southern runs through *Jarun* (*Yarun*) to *Lar*, ancient capital of Laristan. This State stretched formerly along the whole of the coast region, from the Bahrein Islands in

the Persian Gulf to the islet of Diu on the west coast of India. In the sixteenth century the silver coins of Lar, shaped like a date-stone, were the chief currency throughout Persia. But after seizing the maritime routes, Shah Abbas overthrew the kingdom of Laristan, whose capital has even ceased to be a provincial chief town. Nevertheless it still maintains a considerable local trade, and claims to produce the finest camels and dates in Persia. It contains no monuments of its past greatness; but *Firuzabad*, a group of villages lying midway between Shiraz and the coast, abounds in rock carvings representing battle scenes, and a neighbouring headland is crowned by a ruined temple dating from pre-Mohammedan times.

Bushir, or *Bandar-Bushir*, the present terminus on the Persian Gulf of the most frequented highway on the Iranian plateau, dates only from the time of Nadir Shah, who founded a naval station on this site, the nearest on the coast to Shiraz. Bushir, that is, Abu-Shahr, or "Father of Cities," had been preceded by *Rishehr*, another commercial centre, whose position is still marked by a ruined Portuguese fort. But nearly the whole of the maritime trade of Persia is now concentrated at Bushir, which nevertheless offers none of the conditions indispensable to a good harbour. It lies at the northern extremity of a long island, now connected with the mainland, north of which stretches a semicircular bay obstructed by islets and sandbanks, and scarcely 4 feet deep at low water. Large vessels anchor 5 or 6 miles off the port, while smaller craft are able to round the headland and penetrate east of the city to a basin over 20 feet deep in some places. The exports consist of wine, tobacco, and especially opium for the Chinese market, taken in exchange for sugar from Batavia and European wares of all sorts. The total value of the exchanges was estimated in 1880 at about £720,000, yielding a revenue of £24,000.

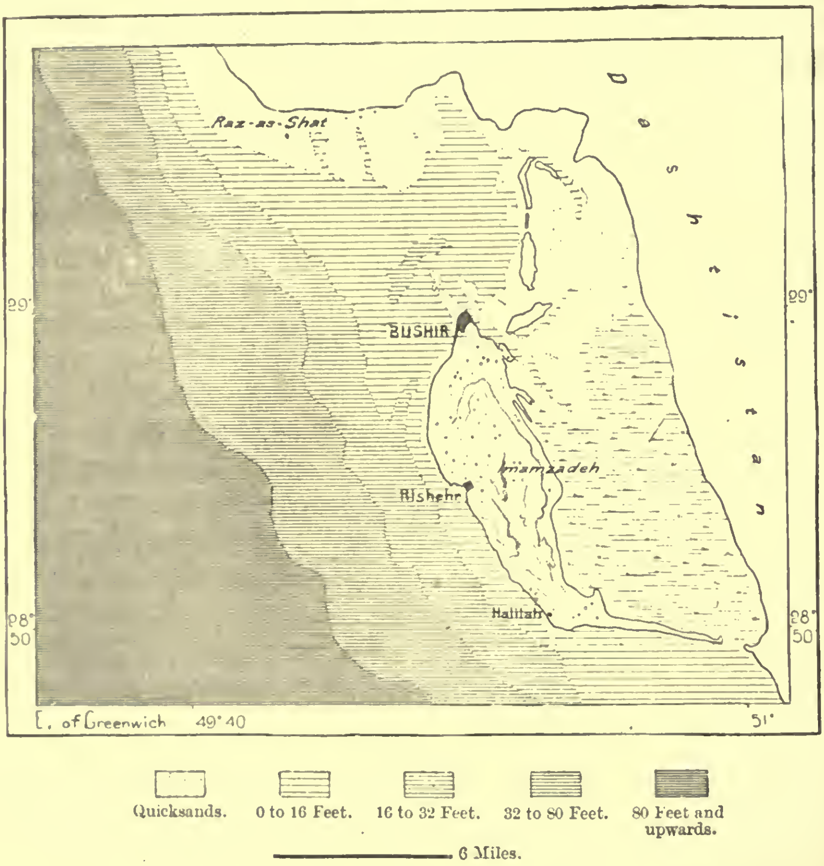
On the route connecting Bushir and Barasjan with Shiraz the chief station is *Kazerun*, which stands at an altitude of 2,950 feet, in one of the intervening valleys between the parallel Tengsir ranges. Here begins Irania proper, both as regards climate and population, the lower coast region of Dashtistan being considered by the Persians as already forming part of Arabia. Kazerun, formerly a flourishing place, is now a mere village surrounded by ruins, and noted only for its tobacco and horses. Some 18 miles farther north lie the extensive ruins of *Shapur* or *Sapor*, former residence of the Sassanides. The surrounding district is described by Ouseley as one of the "paradises of Asia," and nowhere else in Persia are there found so many rock carvings. On the eminence crowned by the acropolis, and on the face of the rocks encircling the valley, the great deeds of Sapor, his hunting-parties, victories, and solemn audiences, are described in a whole series of rich bas-reliefs, which acquire additional interest from the types and costumes of Romans, Arabs, Persians, and Hindus, all faithfully reproduced in these monumental records.

Other ancient remains, sculptured rocks, fire-altars, citadels, are scattered over the Tengsir district in the south-east towards *Firuzabad*, and in the north-east towards *Ram Hormuz* and *Babahan* (*Bebehan*). In some localities the strongholds suggest a social state analogous to the mediæval feudalism of the West.

Every rocky eminence is still crowned with the ruins of these crumbling castles, which are mostly associated in the local legends with the memory of the goddess Anahid.

In the northern region watered by the head-streams of the Little Zab and Diyalah, and included in the relatively unimportant province of Ardilan, the only noteworthy places are the picturesque town of *Bana*, perched on a wooded height between two cultivated glens, and the modern city of *Senna* (*Sihnah*), residence of a governor of the Iranian Kurds, and surrounded by numerous Nestorian

Fig. 54.—Bushir.
Scale 1 : 400,000.



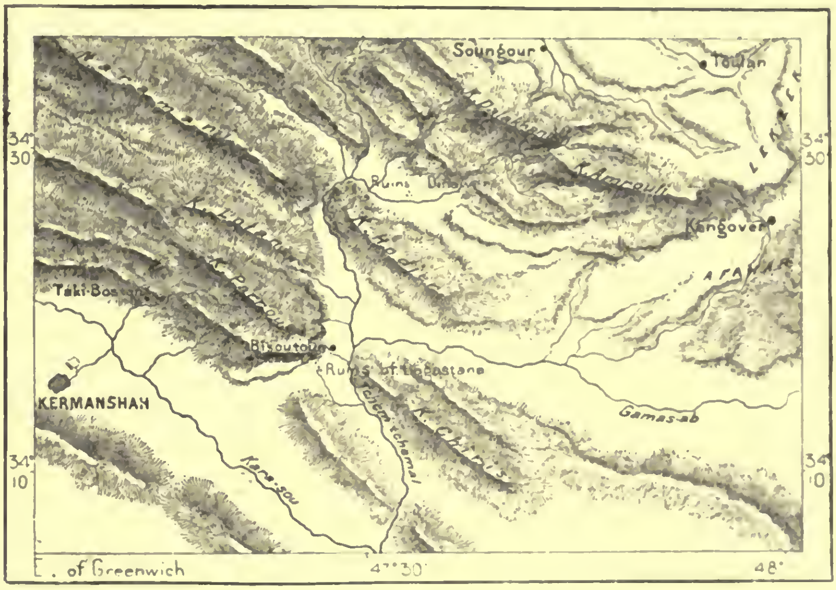
(Chaldean) communities and nomad Ali-Allahi tribes. Here the Mohammedan population of the slopes draining to the Mesopotamian basin is exclusively Sunnite, the border chain forming a distinct parting-line between the two religious sects of Persia and Turkey.

Kongaver (*Ghenjaver*), one of the first stations on the historic route from Ecbatana through the valley of the Kerkha (Kerkhara or Kara-Su) down to Babylonia, lies in a fertile and well-watered plain at the foot of an eminence bearing a marked resemblance to the Acropolis of Athens. Here also stood

a fortified citadel, which was originally a temple dedicated to Anahid, the Persian Artemis, but now a crumbling mass of picturesque ruins. In the middle of the plain stands an isolated mound, possibly of artificial origin, which is also covered with ancient remains, supposed to be those of a temple of the sun. Below Kongaver, the waters flowing from Mount Elvend effect a junction with the Gamas-ab, in whose upper valley lies *Nehavend*, the "City of Noah," famous in the annals of Islam for the "victory of victories" here gained by the Caliph Omar over Yezdijerd, last of the Sassanides. Below the confluence the main stream enters a gloomy defile, at the northern extremity of which stands the hill and village of *Bisutun*, which have become famous in the history of Eastern archæology. No monument has been more useful than the rock inscriptions

Fig. 55.—Kermanshah.

Scale 1 : 800,000.



12 Miles.

discovered at this spot, which have contributed so much to the decipherment of the Persian and Assyrian cuneiform writings. Thanks to the labours of Grotefend, Rawlinson, and Burnouf, a revolution in the study of ancient history has been effected at Bisutun, analogous to that which followed the discovery of Sanskrit and Zend in the last century.

The rock of Bisutun, or Behistun, the ancient *Baghistan*, rises to a vertical height of 1,500 feet above the surrounding pastures. At its foot springs a copious sparkling stream, above which the surface is covered with bas-reliefs almost effaced, not so much by time as by the monarchs who caused their triumphs to be successively carved over the previous sculptures. Other figures still higher up are accompanied by some inscriptions now almost illegible. But the famous table, which has been studied with so much care, still exists almost intact. For a

space of about 150 feet horizontally by 100 in height the surface has been smoothed and polished, and here King Darius, son of Hystaspes, has caused some thousand lines to be inscribed, relating in Persian, Median, and Assyrian his victory over Babylon and the vows made by him on his return. At the foot of the rocks are visible the remains of a terrace by which visitors were enabled to approach the monument; but no trace can now be seen of the sculptures mentioned by Ctesias, and by him attributed to Semiramis.

The same escarpments which bear the Bisutun inscriptions are continued westwards, and north-east of Kermanshah take the name of Tak-i-Bostan, or "Roof of the Gardens," a name recalling the hanging gardens that have been attributed to a legendary princess. Immediately above the plain two chambers have been hewn out of the rock, and these date from the Sassanide epoch, as is evident from the style of the sculptures, and the Pehlvi inscriptions deciphered by Silvester de Sacy. The hunting-scenes on the walls are executed with a vigour and purity of style unapproached by any similar works of ancient Persia. They are obviously due to the Greek artists living at the Court of the Sassanides.

Kermanshah, which lies in a fertile plain a few miles from Tak-i-Bostan, was a very small place at the end of the last century. But since then it has become one of the first cities in Persia, as capital of the Kurdistan province, which has been raised almost to a State within the State by Ali-Mirza, son of the Shah Fat'h-Ali. At that time officers from every European nation, and amongst them the illustrious Rawlinson, father of modern Persian geography and history, resided at Kermanshah, where they founded arsenals and factories of small-arms. Artisans were also attracted from Persia, Turkey, and Armenia; but since those flourishing times the city has again diminished in population and prosperity. In the vicinity is the camping-ground of the Susmani, which tribe supplies most of the dancing-girls in Persia.

Farther on, the great historical route between Irania and Mesopotamia leaves the Kerkha on the south, and runs direct to *Kirind*, rallying-point of several Kurdish tribes. Beyond this place the road traverses a hilly district, gradually ascending to the crest of the Zagros chain, the natural parting-line between the Iranian plateau and the Mesopotamian plains. Throughout its lower course from Kermanshah to the Euphrates the Kerkha flows by no large town, and in the whole basin the only place of any consequence is *Khorramabad*, which occupies a romantic position on the torrent of like name. Above it rises an isolated rocky eminence, which is encircled by a double rampart, and crowned by a fine palace, gardens, and extensive reservoir.

West of this point runs a line of ruined cities parallel with the border range between the plateau and Mesopotamian lowlands. Amongst these are *Sirwan*, on a western affluent of the Kerkha, *Rudbar*, at the junction of the Kerka and Kirind, and farther south *Seimarah*, or *Shehr-i-Khusru*, that is, "City of Chosroes," whose site is still marked by the remains of a vast palace known as the "Throne of Chosroes." But of all the ruins of this region none are more famous than those of *Susa* (*Shuz*), whence the whole country often takes the name of Susiana. This

renowned old capital was conveniently situated on the river Dizful, a tributary of the Karun, not far from its junction with the Kerkha. The intervening plain, some 9 miles broad, is intersected by numerous irrigating rills derived from both rivers, and by the Shapur or Shahwer, a navigable natural channel, which runs from above Susa south-east to the Karun. The grassy mounds marking the site of the ancient city occupy a space some 6 or 7 miles in circumference, and are

Fig. 56 —Shuster and Band-i-Kir.

Scale 1 : 530,000.

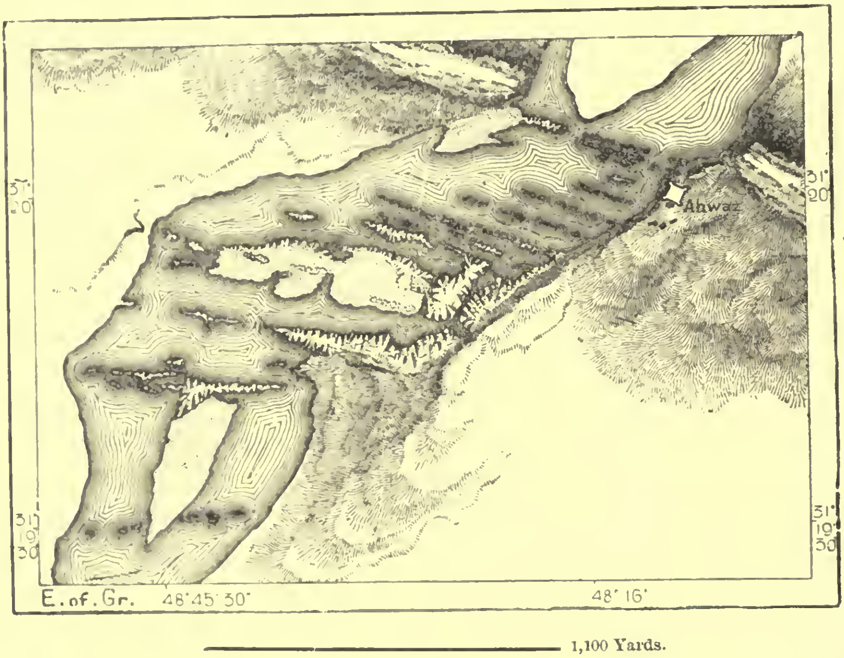
commanded by a square platform over half a mile on all sides, on which formerly stood the citadel. North-west of this terrace is an artificial eminence 165 feet high, marking the spot where the strongest ramparts of the acropolis had been constructed. But beyond a few scattered capitals, broken shafts, and carved blocks, nothing survives to attest the ancient splendour of Susa. The plan, however, has been traced of the great palace begun by Darius, finished by

Artaxerxes Mnenon, and resembling the "Throne of Jemshid" at Persepolis. The black slab bearing a bilingual inscription in hieroglyphics and cuneiform characters, and by the natives regarded as a talisman or protector of the country. has unfortunately been destroyed.

The river Dizful, chief affluent of the Karun, rises in one of the longitudinal upland valleys between the parallel border ranges, flows south-east towards *Burujird*, and after successively piercing all the rocky ridges of Laristan, enters the plains at *Dizful*. Such is the rugged character of this region that the solitary track connecting Burujird with Dizful is not everywhere accessible to pack animals. Dizful, which lies in the vicinity of Susa, may be regarded as the heir of that great city. The river is intermittently navigable to this point by small

Fig. 57.—The Dam of Ahwaz.

Scale 1 : 21,000.



craft, which here take in cargoes of wool, cotton, indigo, corn, bitumen, and sulphur from the surrounding districts. The local industries are also flourishing, and the neighbouring marshes yield the best reed pens in the East. At present Dizful, the "Manchester" of Khuzistan, is the largest city in the Persian lowlands. North-east of it stands the famous *Kaleh-diz*, or "Rock Castle," so named from a natural crag ascended by means of ladders, ropes, and steps cut in the rock. This natural stronghold is the residence of a Bakhtyari chief, who cultivates the upper plateau, and owns some flocks of sheep directly descended from a wild stock.

Shuster, or the "Little Susa," on the Karun, was the first city of Arabistan before the plague of 1832. Since that fatal year, when it was almost depopulated, it has again revived. It has the advantage of lying at the entrance of vast and

fertile plains on a river which, if not easily navigable, is at least accessible to small vessels. It also marks the western terminus of the route which must sooner or later run across the Bakhtyari country in the direction of Ispahan. The hydraulic works needed to make Shuster a riverain port are very slight compared with those executed in the third century of the new era by King Sapor, possibly under the direction of his imperial prisoner, Valerian. One of the old embankments still bears the name of Band-i-Kaisar, or "The Emperor's Dyke." At a sudden bend of the river above the city a cutting was made in the sandstone cliff on the left bank, and the canal thus formed has gradually taken, under the name of the Gerger, the aspect of a natural stream, with its windings, its alluvial deposits, and oscillations of level. Its two branches, which are again united below the cutting, enclose an island converted by the irrigating works into a vast garden. Most of these extensive undertakings have remained in good condition for fifteen hundred years, and attest a knowledge of hydraulics far beyond the capacity of the modern Persian engineers.

At *Band-i-kir* the Karun is joined by the Gerger and Dizful (Ab-i-Diz), and the united stream flows thence south to the Shat-el-Arab. *Ahwaz*, near the reefs and remains of a dyke which present the only obstacle to the navigation of the Lower Karun, is now a mere village, lost amid the ruins and tombs of an ancient city. But lower down it has been supplanted by the town of *Mohammerah*, which stands on a tongue of land between the Karun and Euphrates. This riverain port has the advantage of lying nearer to the Persian Gulf than Bassorah, and, moreover, communicates with the sea through the Bamushir Channel, which lies entirely within Persian territory, and which formed the chief arm of the Karun before that river joined the Shat-el-Arab.

Social State.—Trade.—Industries.—Administration.

No people can be said to excel the Persians in natural intelligence and shrewdness, in mental capacity and artistic skill; yet their present influence over the rest of Asia is scarcely perceptible. To ages long past must be referred the origin of those intellectual movements which introduced Persian ideas into the religions and philosophies of the West, and which enabled the language, literature, and industries of Irania to play so great a part in India and throughout the whole Mussulman world. But since then the pure Persian stock has been reduced in numbers relatively to the other inhabitants of the Iranian plateau, India, and Hither Asia. Even since the beginning of the present century, while the population of Caucasia has increased considerably, that of Persia has been still further diminished by civil wars, pestilence, famine, Baluch, Kurd, and Turkoman invasions. Although there are fewer disorders than in West Europe, epidemics are always of a deadly character, Persia in this respect resembling mediæval Europe. Leprosy still exists in the Khamseh district between Kasvin and Tabriz; in Luristan nearly all the inhabitants except the negro slaves suffer from the "Aleppo button" or the "Medina worm," and in Dardistan at least every third

person is affected by ophthalmia. The country is frequently wasted by pestilence, which seems generally to originate in the Azerbeijan highlands. It first attacks the nomad Kurdish tribes, passing from them to the settled communities, and spreading thence southwards, invariably towards the river mouths. But no calamity is more dreaded than famine, which rages chiefly in the large towns and in the insufficiently watered districts of the plateau.

Besides these evils, the almost total absence of international highways has naturally tended to diminish the influence of Persia over the surrounding popula-

Fig. 58.—Range of the Plague in Kurdistan.
Scale 1 : 1,400,000.

30 Miles.

tions. The whole region comprised between Tabriz and Bampur, between Shuster and Meshed, might be suddenly effaced without in the least affecting the general movement of the peoples between East and West Asia. The great migrations which formerly passed along this route from continent to continent have been entirely arrested. The expeditions and conquests of Nadir Shah, followed by the advance and final retreat of the Afghans, are the last events that recall the ancient importance of Irania as a land of transition between the eastern and western

peoples. So far from occupying this position, it is at present itself hemmed in, so to say, between two new routes, a northern opened up by the Russians across the Kirghiz and Turkoman steppes, and the southern oceanic highway, now regularly followed by the deep-sea and coasting steamers.

The agricultural element represents scarcely two-thirds of the whole population, while the land actually under cultivation is certainly less than one-fifth of the empire. This restricted space is moreover almost exclusively in the hands not of the peasantry but of large proprietors. Vast tracts form part of the royal domain, and are tilled by a class little removed from the condition of mere serfs. Other lands of still greater extent, but mostly lying fallow, have lapsed, either through confiscation or conquest, to the Crown, which usually cedes them temporarily to Court favourites or creditors. Amongst the great landowners must also be included the mosques, schools, and religious foundations of all sorts, whose possessions expand from year to year, not only through legacies, but also through secret concert with public functionaries, who avoid the total sequestration of their estates by bequeathing them to the Church in return for a fixed life annuity. The whole country was threatening to become a vast *wakuf*, or "mortmain," when Nadir-Shah deprived the mosques of a large portion of their immovable property. But the evil has since then become as bad as ever, and the question now arises whether a similar measure of spoliation may not soon be again called for for the public good. The private estates of any size are usually rented to farmers, who receive the water for irrigation, the seed, and stock in exchange for two-thirds or three-fourths of the produce. But when the conditions become oppressive beyond further endurance, the tenants will occasionally conclude the contract by firing their huts, felling the timber they have planted, and removing elsewhere in search of some less cruel taskmaster. According to Stack, no trace remains of the communal system still surviving in India, although he speaks of village communities which annually allot the neighbouring *sabra* or plain according to the number of available ploughs, each plough—that is, each head of a family—receiving a share.

Agricultural property is subject to a fixed impost of one-fifth, which is vigorously exacted under all circumstances. When the country is ravaged by locusts, or the crops destroyed by long droughts, utter ruin overtakes the peasant unable to pay the taxes. Then arise those widespread famines which sweep away whole communities, and convert flourishing cities into wildernesses. Dry winters, leaving the hillsides bare or without a thick mantle of snow, are followed by hot summers, during which the mountain torrents become exhausted and the underground galleries remain without water. Nevertheless some provinces, especially in the north-west and on the Caspian seaboard, are favoured by a sufficiently copious rainfall to render them independent of artificial irrigation. But here as elsewhere agriculture is still in a rudimentary state, field operations being carried on with the most primitive implements, although much skill is shown in the use of the hoe, with which the gardens and orchards are carefully cultivated.

Cereals are the staple crop in the western provinces from Tabriz to Hamadan and Kermanshah, which in good years yield sufficient corn to support a small

export trade to Mesopotamia and Caucasia. But owing to the difficulties of transport, most of the superfluous grain remains unsold. When Napier visited the province of Ardilan, about 80,000 tons of wheat thus remained undisposed of in the Kermanshah district alone. Besides wheat, rice grown only in the Caspian provinces, and a species of millet used for a coarse kind of bread, barley is the only cereal cultivated, and this, in the absence of oats, is reserved exclusively for the horses. All the European vegetables are known in Persia, and some, such as onions and cucumbers, are consumed to an enormous extent. Fruits also constitute one of the chief resources of the country. The melons and pistachio-nuts are of prime quality, and the vine, which grows in the upland valleys from 2,000 to 6,000 feet above sea level, yields excellent raisins, which, under the name of *kishmish*, are exported to Russia and India. Apricots and other fruits, dried or preserved, are also forwarded in yearly increasing quantities to Russia. The apple, pear, plum, and cherry are inferior to the European varieties; but the peach is highly esteemed, and was supposed to have originated in Irania until M. de Candolle showed that China was more probably its true home.

Amongst the industrial plants a foremost rank is taken by the mulberry, cultivated both for its fruit and as food for the silkworm. The raw material is partly used in the factories of Tabriz, Kashan, and Yezd, and partly exported through Trans-Caucasia to Europe. But since the silkworm disease first appeared in the province of Ghilan in 1864, the crop has been reduced to a third. Flax is little cultivated, and hemp used only in the preparation of hashish. But cotton is extensively grown throughout the western provinces, and as far north as Azerbeijan, where the temperature is too low for the American varieties. The southern districts, and especially Laristan, yield henna, and a fine quality of tobacco, since the Crimean War well known throughout the East. But in recent times no industry has been developed so rapidly as that of opium, which is grown especially in Yezd and Ispahan, and which already threatens to become a formidable rival of the Indian narcotic in the Chinese market.* Nearly all Persians have acquired the habit of taking a little every day, and even give it to their horses. But it is seldom taken in excess, as is too often the case with hashish. While the cultivation of the poppy is extending, that of the sugar-cane is diminishing, the plantations at Ahwaz, Shapur, and other cities in the Karun basin and on the rivers of Farsistan, having already disappeared. Persia, where the art of refining sugar seems to have been invented in the tenth century, now imports this product from France and Java.

The nomad element is relatively more numerous than before the Mohammedan invasion. With the Arab conquest came many powerful tribes, which retained on the plateau their wandering habits. Then other hordes of Turks, Turkomans, Kurds, and Baluches were attracted by the local troubles, and the territory occupied by them was constantly enlarged at the expense of the cultivated lands. The displacement of whole communities from one province to another caused many

* Exports of opium from the Persian Gulf in 1872, 872 chests, value £71,000; in 1880, 7,700 chests, value £847,000.

families to adopt nomad habits who had for generations led a sedentary life. The tyranny and exactions of the provincial rulers also drove many to become marauders, rovers, or mendicants. On the whole these nomads contribute nothing to the national resources, except as stock-breeders. Their flocks are numerous enough to supply the wants of the whole nation, which lives almost exclusively on mutton. They also yield considerable quantities of wool, while from the goats is obtained the soft fleece used in the manufacture of the exquisite Kirmanian shawls. Camel-hair, which in spring falls off in large tufts, is also collected for the preparation of felts. The nomads own few horses, but many mules and asses, used chiefly as pack-animals. They leave all the industries to the women, who weave mats, coarse carpets, and rugs for the surrounding markets.

For many ages the industrial processes have undergone but little change, and real attempts to introduce factories like those of the West have completely failed. But the growing taste for European wares is gradually causing the native industries to disappear. At present the Russian dealers are the chief gainers by this displacement. Till the middle of the present century the bazaars were stocked mainly with English goods; but Russian competition has already monopolised the trade of the northern provinces, leaving to the British dealers only a narrow zone round about Bushir. As in Afghanistan and Asia Minor, the commercial as well as the political predominance of the Russians is becoming daily more evident, and the geographical conditions are so favourable to them that their British rivals can scarcely hope to recover the lost ground. The Russian domain is conterminous with that of Persia, all along the line from Trans-Caucasia round the Caspian seaboard to the Turkestan steppes, while the approaches to the plateau from the north, through Tabriz, Reshd, Barfrush, and Astrabad, are much easier than those open to the English from the ports of the Persian Gulf. Here the rugged track leading from Bushir up to Shiraz is carried over no less than six difficult passes.

The invasion of the native markets by foreign wares has brought about, if not the ruin, at least the decadence of the national industries. Certainly Persia no longer possesses so many skilful artisans as at the time when Chardin visited the bazaars of Ispahan, and the finer qualities of earthenware have almost totally disappeared from the manufacturing centres. Nevertheless some of the old trades still flourish, and the traditions of the local schools of art have nowhere been entirely forgotten. Great skill is shown in damascene work, and the wrought steel and copper articles, chased with the graver, or embellished with silver, continue to excite the admiration of foreigners. Admirably-tempered swords are produced in Khorassan, and the arsenals under European management turn out excellent small-arms and even rifles. Inventors of the narghili, the Persians, and especially the natives of Ispahan and Shiraz, still make the best *kalians*, which they enrich with gold and silver chased work encrusted with precious stones. Although nearly all the cotton stuffs, whether plain or printed, come from Europe, many still prefer the stout *kerbas* or *kalemkars* embellished with hand-printed flowers and arabesques. Nor have the coarse woollen fabrics of the Turkomans and Kurds been completely driven from the field by the German and Polish cloths. The local felts ornamented

with figures and inscriptions also continue to be unrivalled. The brocades and velvets of Kashan, as well as certain silk fabrics of Yezd, are highly esteemed, while the carpets of Kirman are universally celebrated for their combined solidity and lightness of texture, exquisite design, and harmony of colour. In this branch the native craftsmen have nothing to learn from Europeans, who, on the contrary, copy their work without attaining equally the variety and graceful symmetry of their figures. Unfortunately weaving is carried on in Yezd, Kashan, and Kirman under extremely unhealthy conditions. Owing to the excessive dryness of the air, the artisans are obliged to work in underground places, where the elasticity of the threads is preserved by the moisture produced by vessels kept constantly full of water. They are also very badly paid, those of Yezd receiving on an average not more than sevenpence a day. A shawl worth £40 will occupy three hands for a whole year, and their earnings will amount to scarcely £16 altogether.

The capital being situated near the Caspian, and receiving most of its supplies from that basin and Trans-Caucasia, nearly all the numerous new routes recently projected have reference to the north-western region between Teheran and the Russian frontier. But the formal concessions for railways have all been cancelled, partly no doubt owing to the fear of future invasions. As soon, however, as the Trans-Caucasian system has been completed and connected with that of European Russia, it will be impossible any longer to prevent the locomotive from penetrating southwards into the Iranian plateau. The physical obstacles are no doubt serious, and some elevated passes will have to be surmounted in order to reach Teheran. But modern engineers have elsewhere overcome far greater difficulties, and the plateau once gained, it will be easy to extend the system to all the more important cities of Irania. It might be possible even to continue it to British India across settled districts throughout its whole course. Stations like Shah-rud, Nishapur, Herat, Farah, Kandahar would supply a local traffic such as would be totally lacking to any line running farther north through the steppes and sands of Asiatic Russia.

Another line has been proposed to run from Bagdad up the Diyalah river valley to Khanikin, on the Turko-Persian frontier, and thence through the Holwan valley, the old "royal route" of Alexander. But the costly nature of the works required to carry the rails across the border ranges and up the slopes of the plateau must for a long time prevent the execution of this scheme. What is here more urgently needed is the conversion of the present mountain-tracts into carriage-roads running from Bagdad to Hamadan by the already mentioned "royal route," from Shuster to Ispahan, from Bushir and Bandar-Abbas through Shiraz to Kirman. "But," say the natives, "the Europeans would have no roads if they had horses like ours," and so nothing is done to improve the local lines of communication. The only route hitherto opened for wheeled traffic is that running from Teheran to Kasvin, along the line of the Russian telegraph-lines.

The whole trade of the country is carried on by caravans, which radiate from the cities of the interior to Erzerum, Bagdad, and other marts beyond the frontier. In the west goods are transported by mules across the rugged border chain, but

camels are chiefly employed on the tracts traversing the relatively level plateau and eastern districts. The convoys often consist of several hundred pack-animals following in single file the lead of some well-trained horse, and, owing to the great heat, marching usually at night. Journeys of 18 to 20 miles are thus performed by the light of the stars, and along the sixteen main routes known as "the Shah's highways," stations are established at regular intervals for the service of the post and the accommodation of men and beasts in vast caravanserais. Nearly all these

Fig. 59.—Routes and Telegraph-lines in Persia.
Scale 1 : 15,000,000.

Railways. Projected railways. Postal routes. Principal caravan routes. Telegraphs. Navigable rivers.

300 Miles.

structures, some of which are not lacking in architectural pretensions, date from the time of Shah Abbas. But since then they have never been repaired, and they are now often rendered inaccessible by heaps of refuse. Most of the bridges erected by the same sovereign have become too dangerous for use, and the paved causeways here and there crossing the quagmires are also carefully avoided. But time is of little value in Persia, and if the roads are difficult it costs little to travel at a slow pace. The route between Teheran and Reshd, the most frequented in the country, usually takes about seven days, although only 180 miles long. The

journey from Teheran to Bushir occupies one month, to Bandar-Abbas forty days, to the Baluch frontier beyond Bampur two months.

The foreign trade of Persia is estimated altogether at some £6,000,000. A fixed impost of five per cent. is levied on all goods imported and exported. But to this tax, the only one imposed on foreigners, octroi and excise dues are added for the natives. By this eccentric fiscal arrangement the European traders are "protected" against their Persian competitors. In the interior the commercial relations are expanding from year to year, as attested by the steady increase of the telegraphic business. Beside the Anglo-Indian system, which crosses Persian territory from Tabriz to Bushir, the Government has laid down a network of wires between all the large cities, the total mileage amounting in 1881 to over 3,000 miles. Most of the heads of the telegraph-offices are members of the royal family.

Public morality necessarily stands on a low level in a country where divorce is so frequent that temporary unions for periods of twenty-five days and even less are regularly sanctioned by the mollahs. Few women reach their twenty-fourth year without having had two or three husbands. The least liable to be divorced are those who before marriage were related to their husbands. These command the whole household, and exercise considerable influence even beyond the family circle. Slavery still exists, and the Arabs of Mascat continue to import negroes and Somalis, whom they sell to the highest bidder. Baluch and Turkoman captives are the only whites that are reduced to slavery. At the same time slaves are generally treated as members of the family, and are commonly addressed as *bacha* or "children." They may even become proprietors, although all they may acquire belongs legally to their owners.

Elementary instruction is more developed than in certain European countries. To nearly all the mosques is attached a school, where the children learn at least to repeat passages from the Koran and strophes from the national poets. The poetic taste has thus been so far cultivated that all Persians take pleasure in the recitation of the compositions of Hafiz or Firdusi. Many are themselves skilled versifiers, and capable of composing treatises on scientific or theological subjects. "The ink of the learned is more precious than the blood of martyrs," say the natives with the Prophet. Nevertheless the printing-press, introduced into Tabriz in the beginning of this century, is still little used. Manuscripts are usually reproduced by the lithographic process, which is best adapted to the graceful form of the Persian characters. There are also a few periodicals in Tabriz, Teheran, and Ispahan; but being under the direct control of the Government, these journals are far from constituting a "fourth estate."

Notwithstanding the decadence of the Iranian monarchy in territorial extent, population, commercial and industrial activity, the sovereign has abated none of his official claims to supremacy. The language that he addresses to his subjects recalls the haughty tone adopted by Artaxerxes or Darius when commemorating their triumphs in rock inscriptions addressed to their countless subjects. What are the "majesties" of Europe, the "kings by the grace of God," compared with such a title as "King of kings, exalted like the planet Saturn, Pole of the Universe,

Well of Science, Footpath of Heaven, Sublime Sovereign whose standard is the sun, whose splendour is that of the firmament, Monarch of armies numerous as the stars"? Amongst the rulers of men who is more legitimate than the "emanation of God himself"? Every Persian subject repeats the lines of Sadi, "The vice approved by the prince becomes a virtue. To seek counsel opposed to his is to wash one's hands in one's own blood." But the Shah's omnipotence is already a thing of the past. In the eyes of his own people he is a sovereign only *de facto*, not *de jure*, for he is not a descendant of Ali, and such alone have any right to the Iranian throne. The grandiloquent titles possessed by the khan of the obscure Turki-Kajar tribe, who became Shah of Persia, have not prevented his power from becoming seriously limited. His last conflict with a European power occurred in 1857, when the English landed a small force at Bushir, and bombarded Mohammerah. Since then in his foreign policy he has been fain to conform to the advice of the ministers resident at his Court. He has especially to attend to the counsel of the Russian ambassador, the maintenance of his power depending largely on the will of his powerful neighbour. Since the murder of the envoy Griboyedov at Teheran in 1829, the kingdom is being gradually but surely transformed into a Russian province. Without incurring the cost or responsibilities of conquest, the new masters of the country enjoy all the advantages of their undoubted political supremacy.

Even in the administration of the interior the royal power is limited by the precepts of the Koran, by custom, by the influence of the mushtehid, and other ecclesiastical functionaries. The Shah has even to take account of a certain public opinion, and still more of the unfavourable criticisms of the European press. But the Crown is assisted by no representative body. The ministers chosen by the Shah, whose number and rank he modifies at pleasure, are mere servants whom he loads with honours or causes to be strangled according to the whim of the moment. The principal wazirs are those of foreign affairs, of the interior, finance, justice, war, religion.

The administrative régime resembles that of the ancient satrapies. The provinces are ruled by the *hakims* or governors, "pillars and props of the State," who are mostly chosen from the royal family and reside at Teheran, being represented on the spot by secondary wazirs. Their power, flowing directly from the royal authority, is without appeal, and comprises the right of life, torture, and death. "The king smiles only to show his lion-teeth" is a proverb quoted by Chardin, and recent instances are not lacking of wretched victims of the imperial wrath being bricked up alive, torn to pieces with the lash, or burnt to death at a slow fire. Imprisonment, owing to the cost of maintenance, is a punishment seldom resorted to, and in any case the doors of all gaols are thrown open on the great feast of the new year. The district governors, as well as the police magistrates in the towns, are absolute in their respective jurisdictions. As in other Mussulman countries, jurisprudence and religion are confounded together. The sheikhs-el-Islam sit as judges in the provincial capitals, and appoint the secondary judges and magistrates in their several circuits. Nevertheless, in all the villages

and in many towns are found the rudiments of a judicial system, and even of a popular representation. All traders elect the syndic, who is charged with the defence of the communal interests before the judges and governors, but who is also held responsible for disturbances arising within his jurisdiction. He is required to make compensation for all loss or damage to property. Hence, having a personal interest in the preservation of order, the police is much better organised than in Asiatic Turkey. The rural populations are not armed, and their disputes seldom lead to serious outbreaks. The nomads have a separate administration, but, like the provinces, they form strictly monarchical groups. The ilkhani, or tribal chief, depends directly on the Shah or on the provincial governor, takes, like the latter, the title of "Pillar of the State," and is the sole lord and master of the community for whose good conduct he makes himself responsible.

The army is composed chiefly of Turki and Turkoman elements drawn from the north-west provinces, where the warlike spirit is much more developed than in the lands occupied by the Iranians proper. Troops of formidable cavalry are also furnished by the Kashkai chiefs, the Bakhtyari ilkhanis, and the sheikhs of Arabistan. All the large iliat groups are required to equip a *fanj*, that is, a body of 800 horse, for the frontier service. Christians and Guebres are exempt from military duties, as are also the natives of Kashan, who bear a traditional reputation for cowardice. Altogether, the army, being of a different race from the bulk of the people, shows itself only too ready to treat them as conquered rebels, and has often recovered the arrears of pay by plundering them. Till 1875 the soldiers were enlisted for their whole life, returning to their homes only on temporary leave; but according to the official documents, the service is now reduced to twelve years, and the recruits are raised by ballot, with the privilege of finding substitutes. But these reforms exist only on paper, and the old system still prevails. The *nizam*, or regulars, are equipped and disciplined in the European way under foreign instructors, formerly English, French, and Austrians, now chiefly Russians and Austro-Hungarians. With the exception of a few squadrons of cavalry dressed as Cossacks, the troops wear the Austrian uniform. According to the official returns they comprise 77 battalions of infantry, 79 regiments of cavalry, 20 of artillery, and 1 battalion of pioneers, numbering altogether 100,000 men, with 200 guns. But there are probably not more than 50,000 effectives, some 10,000 of whom form a special body of gendarmerie and police. The navy is reduced to a few custom-house boats and a royal yacht commanded by an admiral. In virtue of sundry treaties, the Caspian is now exclusively a "Russian lake," while the British navy is supreme in the Persian Gulf.

Persia is one of the few States which have no public debt. The Crown even possesses a well-filled treasury, said to contain about £4,000,000 in the precious metals and gems, or twice the annual receipts, which are estimated at from £1,800,000 to £2,000,000. The two main sources of revenue are the land-tax, fixed at one-fifth of the produce besides supplementary charges, and the customs, farmed out for sums varying from £200,000 to £240,000. The Government also imposes at pleasure additional taxes, either throughout the empire or in special districts,

thus enabling the provincial rulers to indulge in the most oppressive measures, and often involving whole communities in ruin. On the arrival or departure of a hakim, the municipalities are further called upon to contribute towards his travelling expenses. But the sheep and oxen formerly sacrificed at his approach are now replaced by presents of money, costly fabrics, horses, and mules. Lastly, to their official salary the higher officials add the so-called *mokatel*, or supplementary honorarium exacted from his subordinates.

The gold, silver, and copper coinage, made of ingots imported from Russia, is minted in most of the large cities, as far east as Sikohah in Sistan. The gold and silver pieces bear the name of the reigning shah, Nasr-ed-din Kajar, and occasionally even his effigy, notwithstanding the precepts of the Koran. Formerly the *tomans* were of pure gold; now they contain a large proportion of alloy, and are mostly so worn that traders will accept them only by weight. Since 1879 the French monetary system has been officially introduced, and the toman now consists of ten krans (francs), subdivided into ten doubles (*shai*, shaghis), the other divisions being the same as in France.

A table of the provinces, governments, and chief towns, with their approximate populations, will be found in the appendix. The limits of the governments, districts, and *buluks* (cantons) are frequently modified according to the favour enjoyed by the royal princes and others entrusted with the administration of the land, their revenues increasing and diminishing with the extent of their several jurisdictions.

CHAPTER V.

ASIATIC TURKEY.

AS in European Turkey, the portion of Western Asia subject to the sultan of Constantinople forms a dismembered political region, the remnant of an empire still kept together mainly through the sufferance of the great European powers. In the north-east the frontier has recently been rectified to the advantage of Russia, which has seized on the strategic points about the main water-partings. The very routes are already planned by which her armies are to descend the Euphrates, and add the Armenian and Kurdish territories to her other conquests. England, also, unable directly to prevent these political encroachments, has sought compensation in the island of Cyprus, whence the course of events may at least be observed, if not controlled. Even the Greeks of the Anatolian seaboard have begun to reassert the old Hellenic autonomy, by the constitution of the principality of Samos, under the official suzerainty of the Porte.

While the Turkish empire in Asia is thus threatened, either by foreign powers on the frontiers, or by its own subjects on the coast, it is fast losing its cohesion in the interior, through the conflict of its discordant national elements. Greek and Turk, Laz and Kurd, Armenian, Maronite, Druse and Ansarieh, have begun that restless agitation which anticipates and hastens the final rupture of the ties still binding them together in one political system. The various provinces of the empire are, moreover, separated by intervening deserts or wasted lands; and in the south long journeys must be made across the wilderness, in order to reach the Euphrates from the cultivated valleys of the Lebanon. Since the Roman epoch the waste spaces have increased in extent. Round about Palmyra and other ancient cities nothing is now to be seen except scattered nomad camping-grounds. Even since the beginning of the present century, many cultivated tracts have become depopulated, either by famine, emigration, or the frequent conscriptions of soldiers seldom destined to revisit their homes.

Hence, whatever be the official administrative divisions, it will be convenient to treat as distinct lands the various countries of Asiatic Turkey, which present a certain unity in their geographical outlines, their history, and ethnical relations. One of these natural regions is formed by the closed basin of Lake Van, with the

Kurdish and Armenian highlands between Trans-Caucasia and the Upper Euphrates. The Mesopotamian plain, formerly the seat of powerful empires and of many famous cities, also constitutes a well-defined geographical and historical land. The same is true of the Anatolian peninsula, whose seaboard, fringed with islands and islets, develops a vast zone of cultivated lowlands round about the thinly-peopled inland region of plateaux and saline steppes. Cyprus, now constituting a portion of the prodigious British empire, must also be studied apart, presenting as it does a distinctly original culture, intermediate between those of Greece and Phœnicia. Lastly, the long hilly district of Syria and Palestine, skirted on one side by the Mediterranean, on the other by the desert, forms a separate physical region, whose inhabitants have played a leading part in the history of the world by their discoveries, commercial enterprise, and diffusion of ideas. There remain the Turkish possessions on the Arabian seaboard, which are best considered in connection with the peninsula with which they form a geographical whole.

LAZISTAN, ARMENIA, AND KURDISTAN.

(Black Sea Coast—Basins of Lake Van and the Upper Euphrates.)

Although the present political limits of Asiatic Turkey no longer correspond with its natural frontiers, Mount Ararat forms at least a convenient corner-stone at the converging point of the Russian, Turkish, and Persian territories. From the depression between the Great and Little Ararat, where the three empires meet, the Turkish frontier follows for 90 miles to the west the water-parting between the Aras and Euphrates basins. This is confessedly a temporary arrangement, and to judge from past experiences, fresh wars must sooner or later be followed by fresh annexations to the Russian empire. Elburz, giant of the Caucasus, may repeat to Tandurek, Bingöl-dagh and Argæus what it formerly said to Kazbek, in the lines of Lermontov: "Tremble! Peering towards the icy north, I behold sights of ill-omen! From Ural to Danube the clash of arms; brazen batteries moving forward with sinister rumblings; smoking fuses ready for battle!"

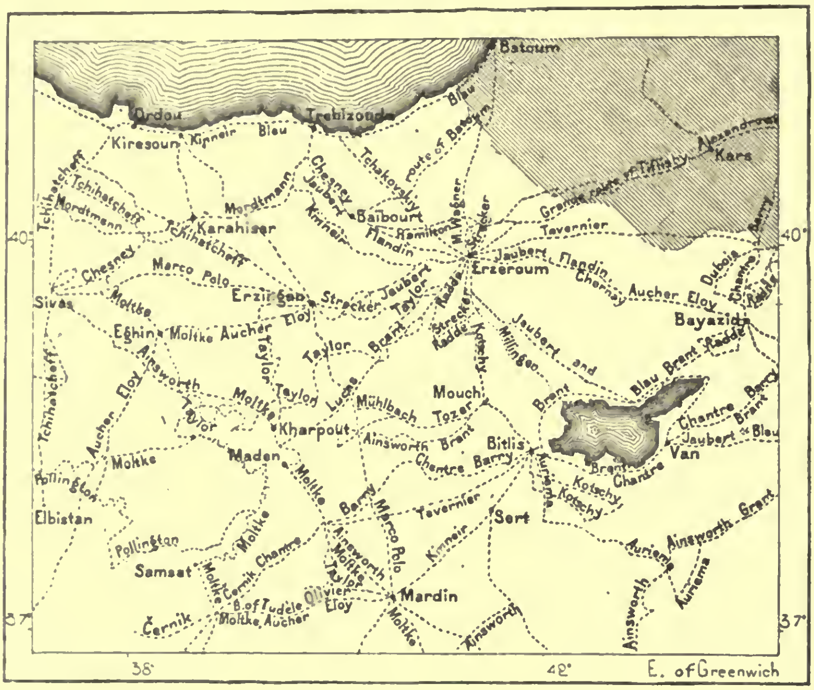
West of Ararat, the green plain of the Echmiadzin basin is skirted by a rugged volcanic chain, some of whose cones, such as the Chinghil and Perli-dagh, exceed 10,000 feet, or about 5,000 above the plain. But the range falls gradually towards the west and south-west, again rising towards the water-parting, and with other converging ridges forming the Bingöl-dagh, or "Mountain of the Thousand Lakes" (11,500 feet), whose winter and spring snows feed the streams radiating in all directions, east to the Aras, north and south to the Kara-su and Murad, the two main branches of the Upper Euphrates. Beyond this point the chief crest of these highlands runs for 150 miles westwards parallel with the Euxine seaboard. Here an opening is at last made for the Kara-su, which trends abruptly south-east to join the other branch of the Euphrates.

The Bingöl-dag is connected with the Erzerum Mountains by a lofty ridge running north, and forming an irregular water-parting east of the sources of the Kara-su. Along this line passes the great military highway between Erzerum and

Kars. Here the culminating point is the Palandöken (10,450 feet); but farther west a still greater altitude is attained by several summits of the Perli-dagh, which is skirted by the first great bend of the Kara-su. North of the Erzerum basin the Bingöl is rivalled by the Ghiaur-dagh, another great centre of streams radiating in various directions. Such are the Tortum-su, which, after forming one of the finest waterfalls in the Old World, flows through deep lava gorges with walls 1,000 feet high, to the Choruk and Black Sea; several head-streams of the Aras and Kura, belonging to the Caspian basin, and lastly, the main source of the Euphrates, which flows to the Persian Gulf. The latter is associated with many local Armenian legends, and is regarded as sacred even by the Turks, who believe

Fig. 60.—Routes of the Chief Explorers of Armenia.

Scale 1 : 6,500,000.



120 Miles.

that while ordinary sins are washed away by the healing waters of the Euphrates, they prove fatal to those pursued by the wrath of Allah. After its junction with numerous other mountain torrents, the sacred stream descends into the Erzerum basin, where the extensive Sazlik swamps become flooded during the melting of the snows in spring. These swamps are probably the remains of an old lake formerly filling the Erzerum basin, although Radde failed, after a long search, to find any species of lacustrine molusc in its bed.

The hills encircling this basin are largely of igneous origin, as is evident from the regular cones rising here and there above the crest. At the very gates of Erzerum is a crater formerly filled with water, which has escaped through a deep

gorge northwards to the Kara-su marshes. But the highest and most remarkable of these volcanoes is the Sishchik of the Ghiaur-dagh range, which rises to the north-west of Erzerum, 3,960 feet above the plain, and to an absolute elevation of 10,550 feet. From the centre of the crater, which resembles Vesuvius in shape, but greatly exceeds it in size, there springs a cone of black and brown scoriæ, round which runs a grassy zone covered with flowers in spring.

The Lazistan and Kurdistan Mountains.

The Kara-su Valley is skirted on the north by a chain of hills running mainly parallel with the Black Sea, and merging westwards in the Sivas plateau. This is the Paryandres of the ancients, now better known as the Kop-dagh, from a peak

Fig. 61.—Bingöl-Dagh.
Scale 1 : 150,000.

of that name rising 13,000 feet above the great highway between Erzerum and Trebizond. The pass crossed by this route, the most remarkable engineering work in Turkey, is 9,000 feet high, or about the same altitude as the Stelvio of the Central Alps. North of it is the Churuk Valley, which, with that of the Kharshut, or Gumish-Kaneh River, forms a surprisingly regular semicircular depression. From the port of Batum, near the mouth of the Churuk, to Tireboli, at the mouth of the Kharshut, the road runs along a vast avenue of peaks, and rises nowhere higher than the pass (6,330 feet) between the sources of the two rivers, near the

village of Vavug. The vast crescent enclosed by these two streams is occupied by the Pontine Alps, a lofty range culminating with the Khachkar peak, about 12,000 feet. In these Lazistan highlands the paths are blocked by snow for six months in the year. "The birds themselves," say the natives, "are unable to fly over the hills in winter."

The mountains coasting the Euxine, west of the Kharshut, towards the Kizil-irmak, although less elevated than the Pontine Alps, are still high enough to render the communications very arduous. They project lofty headlands at intervals seawards, one of which still bears the name of Yasun-burun, that is, Cape Jason, from the navigator of Greek legend. Numerous traces of old glaciers and moraines are visible in the upland valleys of the Pontine Alps, whose lavas, porphyries, and other eruptive rocks have been everywhere scored by the ice-streams. In this region the glacial period seems to have been preceded by the igneous activity, the only surviving indications of which are the frequent earthquakes and numerous hot springs at the foot and on the slope of the hills. According to Strecker, the Kolat-dagh (9,600 feet), rising above the main range over 30 miles south of Trebizond, is the Mount Theckes whence Xenophon's ten thousand first sighted the sea on their retreat from Babylonia. But this peak is scarcely accessible to an army on the march, while the descent on the north side is altogether impracticable. But south of it, and close to the route which the Greeks must have followed, there stands a hill 8,000 feet high, whence the Euxine is perfectly visible. On its highest point stands a monument of porphyry blocks some 30 feet high, surrounded by some truncated cones, which according to Briot, were erected by the Greeks to commemorate their arrival at the coast.

The vast labyrinth of the Anti-Caucasus, or Armenian Alps, comprises not only the region between the Kura basin, Black Sea, and Upper Euphrates, but also the extensive basin of Lake Van, south of Ararat, and the surrounding districts as far as the Persian frontier. Throughout the whole of this region the mean elevation of the land is very great. Even the lacustrine depression of Lake Dalik-göl, south of the Perli-dagh, stands at an altitude of 7,500 feet, whence its overflow is discharged to a tributary of the Aras. South of it flows the Murad, or Southern Euphrates, in a narrow rocky bed over 6,500 feet above sea level. Northwards this rugged upland region is bounded by the twin peaks of Ararat, southwards by the less elevated Ala-dagh, whence flow the highest head-streams of the Euphrates, at an elevation of 11,700 feet. Due east of this point stands the still loftier Tandurek (11,850 feet), known also as the Sunderlik-dagh, Khur, or Khori, which of all the Armenian volcanoes still preserves the most numerous traces of the former plutonic forces. The chief crater, over 3,000 yards in circumference and 380 deep, is now flooded by a small Alpine lake. But smoke still escapes from its flanks, and on the eastern slope is a cavern emitting vapours at a temperature of 265° F. Here is heard a continuous booming, which resembles the sound of distant artillery, and which, during one of the Russo-Turkish frontier wars, caused an alarm in the two hostile armies encamped in the neighbourhood. At the north-west foot of the Tandurek well up the copious sulphur springs of

Diyadin, covering the ground with their many-coloured incrustations, and forming a thermal stream, which descends through a series of smoking cascades down to the icy waters of the Murad. Farther down the Murad itself disappears in a basalt underground channel, which is continued by a deep cañon between two vertical rocky walls.

The Tandurek is connected north-westwards with the Perli-dagh by a ridge, which is crossed by the route from Erzerum to Tabriz, and which would appear to form the true natural frontier between Turkey and Persia. But the eastern valley, watered by Lake Balik with its emissary of like name, is at present included within the limits of the Ottoman empire. The range running east of Tandurek over against Ararat also forms a natural frontier, both slopes of which are occupied by semi-independent Kurdish tribes between the two conterminous states. Eastwards this range projects a few short spurs, terminating with abrupt headlands towards Lake Urmiah. But in the direction of Lake Van several branches stretch for a long way westwards, gradually merging in the plateau, which has here a mean altitude of over 6,000 feet, while some of the peaks on the main range itself rise to an absolute height of 10,000 feet. The same elevation appears to be attained, if not exceeded, by the Hakkiari hills, which sweep round to the south along the southern shore of Lake Van. The circuit of mountains enclosing this lacustrine basin is completed on the north and north-west by another range, culminating with the extinct volcanic peak of Seiban, or Sapan, (about 12,000 feet), which, according to Tozer, is covered with snow for ten months in the year. This majestic cone, formerly supposed to rival Demavend in height, and associated with Ararat in the Armenian legends connected with the Noachian deluge, commands a magnificent prospect of the northern highlands, sweeping round in a vast curve of 180 miles from Ararat to Bingöl-dagh. Southwards is visible the side crater flooded by the Aghir-gol, or "Still Lake," beyond which stretches the basin of Van itself, with its inlets, bays, marshes, and encircling hills. At the west foot of Sapan lies the freshwater lakelet of Nazik, on the water-parting between Van and the Euphrates, to both of which it sends emissaries.

The last southern terraces of the Armenian plateau terminate above the Mesopotamian plains in a line of rugged cliffs scored by deep river gorges, but forming in their normal direction a regular north-western continuation of the Luristan border range. Immediately west of Lake Van rises the vast crater of the Nimrud-dagh composed entirely of scoriæ, the south side of which is indented by an elliptic bay, section of another volcano now partly submerged. The whole of Upper Armenia is an igneous region, still subject to frequent earthquakes.

Lake Van.

Lake Van, the Tosp of the Armenians, whence its classic name of Thospitis, stands at an altitude of 5,400 feet; that is, 1,100 feet higher than Urmiah. It has an estimated area of 1,470 square miles, or somewhat less than its Azerbeijan neighbour, which, however, it considerably exceeds in depth, and consequently also

in volume. On the east side, within 2 miles of the town of Van, the soundings give 80 feet of water, while the bed of the lake sinks to far greater depths along its southern shore. The great bay, however, which penetrates some 36 miles north-eastwards, forms a shallow expanse, where in spring the mountain torrents develop extensive alluvial deltas. According to a local tradition, this inlet was formerly a fertile plain watered by two streams which continued their winding course south-westwards to Bitlis. In any case, the data collected by Jaubert, Loftus, Strecker,

Fig. 62.—Lake Van—Tadwan Bay and Mount Nimrud.

and others, leave no doubt regarding the great changes of level undergone by this inland sea. Between 1838 and 1840 it rose from 10 to 13 feet, and a similar rising seems to have occurred early in the seventeenth century, the waters again subsiding after a few years. Several of the islets along the coast have at times been flooded, and old promontories have been transformed to islands constantly diminishing in extent. The highway skirting the north side has in the same way steadily receded farther inland. The town of Arjish, on the north-east bay, has almost

entirely disappeared ; while Adeljivas, on the north coast, is now threatened by the rising waters. On the east side also the lake is advancing towards Van, which has itself already replaced a more ancient city of that name. The village of Iskella has been partly abandoned, and the boatmen moor their craft to trunks of trees which now stand far from the shore. To these constant invasions are perhaps to be attributed the local traditions regarding large cities formerly swallowed up by the lake. What is the explanation of a phenomenon, the very opposite of what is observed in nearly all the other Asiatic lacustrine basins? Unless it be due to some local atmospheric currents attracting to this region more rain-bearing clouds than elsewhere, the reason given by the inhabitants themselves must be accepted. According to their statements the underground passages, through which copious streams formerly escaped to the head waters of the Tigris, have been partly effaced, and the reservoir receiving more supplies than can now be carried off by evaporation and subterranean emissaries, must continue to rise until an equilibrium is established, or until the excess is discharged south-westwards to the torrent of Bitlis. It is also stated that the neighbouring nomads have rolled a huge block to the head of one of the underground outlets, and since then the lake has been gradually but steadily rising. The lakelet of Erchek, east of Van, is also expanding, a circumstance which would seem to point rather at a change of the local climatic conditions. Erchek also resembles Van in its saline properties, but contains, according to Millingen, a strong proportion of arsenic.

Van itself is far too brackish to be potable by man or beast. But being still less saline than Urmiah, it contains a more developed fauna. At the mouths of the streams considerable captures are made of a species of fish wrongly identified by Joubert with the anchovy of the Black Sea. As shown by the naturalist Deyrolle, it is a blay (*Cyprinus Tarachi*), which appears to avoid the more saline waters, and shows itself near the surface only in the spring, from March to May, when the fresh supplies from the melting snows are spread over the heavier salt layers found at lower depths. The saline deposits round the shores both of Van and Erchek, consist in even proportions of carbonate and sulphate of soda, utilised in the manufacture of soap, which is exported as far as Syria.

Boats are rare on Lake Van, although Fanshawe Tozer recently crossed it in a fishing-smack, accompanied by a flotilla of five others, and a steamer was launched on its waters by the American missionaries in 1879.

Climate—Flora—Fauna.

The very existence of Van, Urmiah, Gokcha, and of the numerous smaller lacustrine basins on the Akhaltzikh plateau, between Kars and Tiflis, is sufficient proof that the climate of the Armenian uplands is far more humid than that of Persia. The whole of Lazistan and the hilly region comprised by the ancients under the name of Pontus, lie, in fact, within the influence of the western and north-western winds, which bring from the Euxine an abundant supply of rain during the summer storms, and of snow during winter. Although the rainfall

is less copious than on the southern slopes of the Caucasus, where the annual discharge exceeds 75 inches in Mingrelia and Imeria, it amounts to at least half that average in some of the more favoured valleys of Lazistan. In the absence of accurate returns, the mean yearly discharge may be approximately estimated at about 20 inches for the whole of the Armenian uplands.

On the other hand certain districts, such as the Olti plateau, shut off by lofty ranges from the rain-bearing clouds, have seldom sufficient moisture for agricultural purposes. Hence, as on the Caspian slope of Trans-Caucasia, the brooks have here to be collected in reservoirs, and dispersed in a thousand channels over the arable lands. But notwithstanding the barrier of the Pontine Alps, most of Southern Armenia is exposed to the influence of the moist winds, which blow from the Euxine across the Sivas plateau into the funnel-shaped upland valleys facing westwards. They prevail chiefly in winter, when they clothe with a thick mantle of snow the amphitheatre of hills about the head-waters of the Euphrates. In summer they are succeeded by the dry northern and eastern breezes from the great polar current, which traverse the Asiatic continent and melt the Alpine snows. A supply of moisture is also yielded by the south-western winds from the Mediterranean, to which are due the soft, hazy outlines of the hills, and the delicate tints of the landscape, conspicuous even in clear weather. On the northern slopes the superabundant humidity from the Euxine is sufficient to develop rivers, such as the Choruk and Kharchut, whose volume is out of proportion with the extent of their basin. Enough remains even for the southern slope, where it feeds the Euphrates and Tigris, whose united stream in the Shat-el-Arab exceeds all other rivers between the Indus and the Danube. The Euphrates may thus be regarded as a great emissary of the Black Sea, whose evaporated waters are precipitated through this perennial channel into the Persian Gulf.

On the shores of the Euxine a tolerably mild temperature prevails throughout the year. Here the glass seldom falls 10° F. below freezing point, while the moderating influence of the sea prevents the summer heats from exceeding 77° F. But the Turkish Armenian uplands, lying beyond this influence, are subject to extreme vicissitudes of heat and cold. There is scarcely any spring at Erzerum, where the winter snows rapidly melting, suddenly change the torrents into large rivers. Extended observations are still needed to form a just estimate of this climate, as compared with that of other countries in Europe and Asia, whose meteorological conditions are already determined. But differences of no less than 60° F. have been recorded between dawn and noon, while the glass seems to oscillate between the extremes of 13° F. and 112° F. of absolute cold and heat. The vegetation, retarded by the winter and spring frosts, is stimulated by the early summer heats, when all nature bursts suddenly into full bloom. Wheat is developed from sprout to ear within the space of two months; but it would soon be burnt up by the fierce midsummer sun, were it not supplied with sufficient moisture by artificial irrigation. This cereal is cultivated to an altitude of 6,000, and barley up to 7,000, feet; but at these extreme heights the crops are threatened by the sudden return of frost in the early autumn. On the whole, agricultural

operations are confined to lower limits on the Armenian highlands than on the more northerly Georgian slopes of Caucasia. This is due probably to the form of the Armenian ranges, which give access through numerous openings to the northern winds, against which the Great Caucasus presents an unbroken barrier.

In the neighbourhood of the Black Sea, the vegetation resembles that of Mingrelia, but presents fewer species and a less varied display of bright colours. Lazistan, say the natives, is the land of fruits, while Armenia is supposed to be the original home of the vine, pear, and many other species. In the Trebizond district, the hills are clothed from base to summit with a rich vegetable humus, which supports a varied growth of garden plants, orchards, grassy tracts, evergreen and other trees. The towns and villages on the coast are surrounded by citron and olive groves, which are succeeded higher up by the walnut, oak, and chestnut. Beyond these comes the zone of scarlet rhododendrons and azaleas, to the latter of which has been attributed the poisonous action of the honey that intoxicated or demented the Greek soldiers of Xenophon's expedition.

Further inland the Armenian highlands are mostly destitute of arborescent vegetation. Nothing is seen but bare rocks and pastures, in a region which might be covered with timber. Hence animals and even birds are rare, most of the slopes being occupied by nomad pastors, with their flocks of fat-tailed sheep, guarded by half wild collies, which are often more dangerous than bears or wolves. There is also a good breed of horses, extremely gentle yet full of spirit, but inferior in strength to the Turkoman and in graceful action to the Persian species. But the chief resource of the whole of this region is the sheep, of which as many as forty millions are said to be found between Ararat and the Persian Gulf. At the beginning of the century Jaubert estimated at 1,500,000 the number sent annually to Constantinople from the Armenian uplands. Aleppo, Damascus, and even Beirut, are supplied with mutton from Armenia and Kurdistan, and during their campaigns the Turkish armies largely depend for their provisions on the region of the Upper Euphrates.

Inhabitants—The Lazes and Armenians.

The inhabitants of Lazistan, Turkish Armenia, and Kurdistan, estimated altogether at upwards of two millions, belong mainly to the same ethnical groups as the populations of Trans-Caucasia. Here the political frontier forms no ethnographic parting-line. On both sides dwell peoples of Georgian stock; the Turkish Erzerum, like the Russian Erivan, belongs to the Armenian domain; Kurdish nomad pastors frequent the shores of lake Van as well as those of lake Gokcha. At every fresh Russian conquest, migrations, forced or voluntary, have taken place between the conterminous states. Between 1828 and 1830 over 100,000 Armenians passed from Turkey and Persia into Russian territory, where they received the lands of the Turki and Kurdish immigrants into the Mohammedan countries. Since 1877 similar shiftings of the populations have taken place between Turkish

Armenia and the provinces annexed to Russian Trans-Caucasia. The Turks of Ardahan and Kars have retired to Erzerum and Sivas, those of Artvin to the Van plateau, the lands thus left vacant being occupied by Armenians from the Upper Chorukh, from the Erzerum and Van districts. In this readjustment of the populations, the Ottoman empire has on the whole benefitted most. The Mussulmans almost unanimously flee from their new Russian masters, whereas many Turkish Armenians prefer the misrule of the pashas to the meddlesome interference of the Muscovite administration. Thus the chief result of the Russian invasions has been to transform Armenia into another Turkestan.

Nevertheless these displacements, which have been constantly accompanied by a frightful mortality caused by famine, fever, homesickness, and hardships of every sort, are still far from having produced an ethnological grouping coincident with the conventional political frontier. In case of fresh conflicts with the Porte, Russia naturally derives great diplomatic and military advantages from the presence of kindred communities in the conterminous provinces. On behalf of her Trans-Caucasian Georgian subjects, she acquires a right or pretext for interfering in the affairs of their Laz brethern in the Trebizond district. As mistress of the Kurdish pastors, she may claim the prerogative of maintaining order amongst these restless nomads on both sides of the frontier. But especially as possessor of the holy city of Echmiadzin, and guardian of the Armenian Christians, she may feel called upon to insist upon those administrative reforms which British influence has hitherto been powerless to introduce into Turkish Armenia. In European Turkey, Russia has successfully interfered on behalf of the Bulgarians, and obtained for them an autonomous territory stretching nearly to the Gulf of Salonica. In the same way, when the occasion serves, she will be ready armed with a pretext for intervention in favour of the Armenian communities scattered over Western Asia from Erzerum to the Gulf of Alexandretta, over against Cyprus, England's new acquisition in the East. England herself can scarcely expect to offer an efficacious guarantee against farther Muscovite encroachments on the present limits of the Ottoman empire. She can no longer control the course of events in these regions, and the refusal or neglect of the Turk to introduce the much needed reforms will merely serve as an excuse for withdrawing from her new "Protectorate."

It is sad to reflect that such a rich land, one of the fairest, and formerly one of the most productive in the temperate zone, is now so little utilised by man. The population, which cannot be estimated at more than ten or twelve to the square mile, seems to be even diminishing. Yet the dominant Turki race, although still mostly in the tribal state, possesses many sterling qualities, which ought to secure it a considerable part in the common work of human progress. Laborious, long-suffering, persevering, the western Turkoman unweariedly returns to field labours interrupted by invasions. Conscious of the renown of their forefathers, the Kara-Koyunli and the Ak-Koyunli—that is, the "Black" and "White Shepherds"—preserve a feeling of national cohesion unknown to most of their neighbours. Hence the facility with which they absorb fresh ethnical elements, such as Lazes, Circassians, and Kurds, who gradually become assimilated to the ruling race, especially in those districts

where nomad habits have given place to agricultural pursuits. For Turkey the true source of regeneration lies rather in these vigorous Turkoman peasant communities than in political alliances or "European capital."

The Lazes of the seaboard and the Ajars of the coast ranges between Batum and Trebizond, are Mohammedans of Georgian stock, endowed with the same fine physical qualities as their Trans-Caucasian kinsmen. Their speech is closely allied to that current on the Mingrelian lowlands, but affected by Turki and Greek elements. At the same time, the migratory habits and different religious and political institutions of the Lazes, cause their dialect to diverge more and more from that of the Russian Georgians, and become more assimilated to the Turkish, which has even already displaced it in some districts on the Upper Chorukh river. These mountaineers are a hardy, industrious race, fond of adventure, formerly much addicted to piracy on the Euxine waters. They are now chiefly occupied with fishing, agriculture, and the transport of merchandise, while thousands seek employment as porters, coppersmiths and tide-waiters in Constantinople. In Lazistan proper, which reaches westwards to Cape Kemer, the inhabitants are almost exclusively of Laz stock. But beyond this point, in the direction of Trebizond and Platana, Laz communities become gradually less numerous, and more interspersed with Greek and Turkish populations. Next to them the most important ethnical elements are the Cherkesses, Abkhasians, and other refugees from the Caucasus, about 6,000 of whom are annually moving westwards. The Armenians have only a small group of villages about Kopi, on the frontier of the Batum district, and the Greek colony is reduced to a few isolated families in the towns along the coast. In certain inland villages, especially at Jivislik, on the road from Trebizond to Gumish-kaneh, there occurs an intermediate class of "Mezzo-mezzos," in the morning speaking Turkish and visiting the mosques, in the evening conversing in Greek and celebrating Christian rites. These half-caste Hellenes and Lazes have by some been identified with the Macrones, who, according to Herodotus, practised circumcision, and who may have consequently been regarded as a sort of Mussulmans before the Moslem conquest.

Although nowhere in Trans-Caucasia or Asiatic Turkey forming a compact national community, the Haikans (Armenians) form the dominant population on the southern slope of the Chorukh Valley, as well as on the main branches of the Upper Euphrates. They are also in exclusive possession of some upland valleys in the Jihun basin, Asia Minor, where the traditions of the old Armenian empire are still best preserved. The total number of Armenians in the provinces left to Turkey has been variously estimated, according to the political bias of the writers, at from 500,000 to 2,000,000 or 3,000,000. They may approximately be calculated at some 700,000 or 800,000—that is to say, about one third of the whole Armenian nation. In Erzerum, as in Constantinople, they are distinguished from the Turks by their greater love of instruction and industrious habits. In the vilayet of Van they have almost a complete monopoly of the local trades. They readily migrate, and thousands are now settled in Constantinople, and the other cities of European and Asiatic Turkey, where they find employment especially as builders, artisans, and carriers.

The Kurds.

While the centre of gravity of the Armenian nationality now lies at the foot of Mount Ararat within Russian territory, the Kurds are concentrated chiefly on the Van plateau, whence their numerous tribes radiate over a vast extent of country. Including in this group the Luri and Bakhtyari of the Persian border ranges, and the various nomads removed by the Persian sovereigns to Khorassan and the Baluch frontier, their domain is found to stretch for about 600 miles from the neighbourhood of Hamadan to Aintab, with a mean breadth of 150 miles. But the few tribes scattered amongst the Armenians, Georgians, and Tatars of Russian Trans-Caucasia, have little cohesion with the Persian and Turkish divisions of the family. The majority recognise the sovereignty of the Porte, although various communities, especially in the Dersim highlands, south-west of Erzerum, still form petty semi-independent states. Elsewhere also, and notably in the basin of the Great Zab, they constitute a compact nationality, powerful enough to aspire to political autonomy in the Turko-Persian border lands. Attempts have even been made to found a common league or confederacy of all the Kurdish tribes, which, however aggressive towards other races, seldom quarrel amongst themselves.

Scattered over such a vast range, the Kurds naturally present considerable diversity of physical types. In some respects they even form distinct ethnical groups, some being affected by Turkoman or Tatar, others by Armenian or Persian elements. Certain tribes, regarded as of pure Armenian stock, are supposed to be descended from old Christian communities converted to Islam. Nearly all the Turkish soldiers stationed in the Kurdish highlands intermarry with the natives, whereby the physical appearance becomes still farther modified. Some are noted for their coarse and even ugly features, while others rival the finest Cherkesses in grace and symmetry of form. Those of the Urmiah and Van basins, who are regarded as the descendants of the Kudraha, mentioned in the Persepolis inscriptions (the Kardukhi and Gordyans of Greek writers), are of middle size and thick-set, with a haughty expression; while those of the Persian frontier have generally a receding brow, wide eyebrows, long lashes, large mouth, projecting chin, pointed aquiline nose. Many, especially of the Persian tribes, dye their bushy beards and hair red or black, although naturally light hair and even blue eyes are far from rare. Five skulls measured by Duhousset are strongly brachycephalic, thus presenting a marked contrast to the East Persian, Afghan, and Hindu crania. But no general conclusion can be drawn from such partial measurements, still less from the vague comparisons made by the American missionaries with the Redskins of the New World.

The children are very pretty, and the features of the women, who never go veiled, distinguished by great regularity, large eyes, aquiline nose, robust figure, deep black hair, well harmonising with a slightly brown or swarthy complexion. Unfortunately they are too often disfigured, like their Hindu sisters, by the gold ring passed through the nostrils. Both sexes are fond of finery, bright-coloured, costly robes, high head-dresses, enveloped by the men in gorgeous turbans. The

TYPES AND COSTUMES—KURDISH GENTLEMEN.

Kurd completes his costume by an arsenal of small-arms—revolvers, knives and yatagans—attached to the girdle, rifle swung to a shoulder-belt, a long lance decorated with ribbons and carried in the hand. But this is mere parade, most of such encumbrances being dispensed with in actual combat.

Most explorers and missionaries that have resided any time amongst them have recognised two well defined castes, descended probably from distinct ethnical stocks, and known as the *Kermani* or *Assireta*—that is, nobles—and *guran*, or peasants. The latter, four or five times more numerous that the former in South Kurdistan, are regarded, not without reason, as the descendants of a conquered and enslaved race. Like other serfs attached to the soil, they are

Fig. 63.—Populations of Turkish Armenia.
Scale 1 : 6,000,000

120 Miles.

known in Turkey as raya, or riots. In certain districts they are compelled to till the land for masters who claim over them the right of life and death. Under no circumstances can they rise to the rank of warriors, but, like cattle, change their owners according to the vicissitudes of battle. On the other hand, the military, or noble caste, would be dishonoured by agricultural labour. Besides stock-breeding, their only occupation is pillage and warfare, either on their own account or as mercenaries. The type is inferior to that of the Gurans, being marked by angular features, small sunken eyes, heavy figures. Amongst them are also found a few Chinghianehs, or gipsies, differing in no respect from those of Europe; and the Tere-Kamehs, who occupy about a hundred villages near the

Persian frontier, and who, owing to their Turki speech, are regarded as of Tatar descent.

Like the race itself, the Kurdish language presents a great diversity of form, although the common structure is essentially Iranic. The vocabulary has been enriched in the east by Persian, in the west by Arabic and Turkish words, in some district even by Syriac and Russian terms. The Zaza, current at Mush and Palu, presents certain analogies with the Ossetian of the Caucasus; and, according to Lerch, there are altogether five distinct dialects, one of which, the Kermanji, is spoken by all the tribes west of Mossul. All these idioms are harsh, sounding like a series of explosions, yet less affected by sibilants and gutturals than most of those current amongst the surrounding peoples. To the national literature, consisting of a few songs in praise of their heroes and wild mountain scenery, the American missionaries have added a translation of the Bible and a few religious works. Having no distinct writing system, the Kurds employ the Arabic as modified by their Persian neighbours, and the lettered classes usually exchange the rude national speech for the more cultured Turkish or Persian.

Neither Baluch, Bedouin, nor Apache has developed the marauding instinct to a higher degree than have the warlike Kurd tribes. The chief, whose mountain fastness commands like an eyrie the entrance of the gorges, entertains a band of freebooters, who scour the surrounding highways, and sweep the plunder into his inaccessible den. Armed robbery is regarded as the most honourable of deeds; but smuggling, which might be so easily carried on in an upland region on the confines of three empires, is held in contempt. Advantage, however, is taken of the conterminous frontiers, in order to organise excursions now against one, now against another of the neighbouring states, and when pursued rapidly retire across the border. It is to avoid these dangerous hereditary foes of their race and religion that so many Armenian communities have forsaken their homes and withdrawn to Russian territory. In many districts of the plateau, a chronic state of blockade is kept up against whole towns and groups of villages, where the inhabitants live in constant dread of the marauders. The drastic measures, such as impaling and the stake, taken against them, instead of striking terror into these brigand tribes, have often the effect of stimulating them to frightful reprisals. Suppressed in one place, the incessant struggle breaks out in another, at times compelling the Turkish Government to fit out costly military expeditions. According to Polak, there is one Kurdish sect which strictly forbids the plunder of the living, in consequence of which these sectaries first scrupulously murder their victims before rifling them. Nevertheless, under ordinary circumstances, human life is respected, and clothes and provisions are even occasionally left to the poor in the villages plundered. Bloodshed is avoided except in the case of personal or hereditary feuds, when the laws of vendetta may be enforced in the mosque itself. The chiefs, to whom all yield blind obedience, keep open table, and return in banquets the presents exacted and the products of their plundering raids. The stranger also is well received when he presents himself as a guest.

Notwithstanding their warlike habits and marauding propensities, the Kurds

are on the whole more honest and trustworthy than the surrounding races. In general they respect their women, who enjoy far greater freedom than their Turkish and Persian sisters. But the incessant toil to which they are condemned renders their existence so burdensome that mothers are said frequently to make away with their female offspring, in order to save them from their hard lot. But, unlike the Circassians, whom they resemble in so many other respects, they have never been accustomed to sell them to the purveyors of the Turkish harems. Notwithstanding their many sterling qualities, the Kurds are threathened with extinction in many districts in Persia and Turkey, where they are diminishing in numbers, and here and there merging in the surrounding populations. The serfs, who constitute the bulk of the nation, have no interest in maintaining the relations binding them to the warlike caste, which on its part is condemned to exhaustion by its very mode of existence—a perpetual warfare against all their neighbours. Religious animosity contributes to the work of destruction, at least in Persia, where three-fourths of the Kurds are zealous Sunnites, and consequently regarded by the Iranian Shiahs as heretics deserving the worst of fates.

The Kizil-Bashes, Yezidis, and Nestorians.

In this land of transition, where the remnants of so many peoples have become amalgamated, traces have survived of the most varied forms of worship. A Kurdish community in the sanjak of Sert, has even been mentioned as professing no religion. Amongst the tribes on the Armenian and Kurdistan plateaux there exist not only members of every Mohammedan and Christian sect, but also unconscious heirs of the old Persian Mazdeism. The Kizil-Bashes, or "Red Heads," a term applied in Afghanistan and other eastern countries to peoples of Persian stock, are for the most part Kurds. Of 400,000 of these sectaries not more than 15,000 are of Turkoman descent, while two or three tribes call themselves Arabs. The Red Heads, who are centred chiefly in the middle Euphrates basin, on the banks of the Ghermili and Upper Kizil-irmak, are included by the Mussulmans among the Christian sects, because they drink wine, allow their women to go unveiled, and practice the rites of baptism and communion. They are also accused, rightly or wrongly, of celebrating nocturnal feasts or orgies, in which unbridled licentiousness prevails. Hence the term Terah Sonderan, or "Extinguishers of Lights," by which they are commonly known. Their religious chief resides in the Dersim district, near the river Murad.

Other detested sectaries are the so-called "Devil Worshippers." These Yezidi, or Shemsieh Kurds, although they number scarcely 50,000 souls altogether, are scattered over a very wide area. Their chief settlement is in the Sinjar hills, north of the Mesopotamian plain, but they are also found on the Van and Erzerum plateaux, in Persia and in Trans-Caucasia, near the east bank of Lake Gokcha. One of their colonies is even said to have penetrated westwards to the Bosphorus, over against Constantinople. Hated by all their neighbours, persecuted and reduced by famine and epidemics even more than by the sword, they

have nevertheless contrived to survive from age to age, with nothing to sustain them except their faith, and the memory of their trials and afflictions. They pretend that their great saint, Sheikh Adi, wrote a code of doctrine, the so-called Aswat, or "Black" Book. But the assertion is unsupported by any documentary evidence. The autonomous Sinjar Yezidis, half-caste Kurds and Arabs, were mostly exterminated in 1838, when those who had taken refuge in the caves were smoked to death, and their women sold into slavery. Since then no Yezidi community has maintained its political independence.

The accounts given by travellers of the different Yezidi tribes vary so greatly that these sectaries have been referred to several distinct origins. Those residing near the Armenians seem to belong to that ethnical group, and extant documents mention a village in the Van district where the sect was founded in the ninth century. In Sinjar, on the contrary, they are traced to an Arab source, and their cult associated with Islam. In Persia again they are regarded as Guebres. Yet they are connected with the Mussulman world by their very title of Yezidi, derived from Yezid, the detested caliph, grandson of the prophet, and murderer of Hussein. Lastly, the Kurds confound them with the Christian sects of the lowlands, attributing to all alike every conceivable abomination. The ceremonies vary with every district. Some baptise their children and make the sign of the cross; others practice circumcision, which is prohibited elsewhere; in one place polygamy prevails, in another all are strict monogamists; formerly blue was chiefly worn; now this colour is held in horror, and replaced by white.

But the common bond of union between all the Yezidis, is the worship of the *melek* Taus, their peacock or phœnix king, Lord of Life, Holy Ghost, Fire and Light, represented under the form of a bird with a cock's head, perched on a chandelier. His "prime minister" is Lucifer, the morning star, still venerated notwithstanding his fall. Having themselves fallen, by what right, they argue, could they curse the fallen angel? And as they themselves hope for salvation through the divine favour, why may not Lucifer also resume his rank as chief of the heavenly hosts? The prophets Moses, Mohammed, Jesus Christ, may themselves have been his incarnations: possibly he has already returned to heaven, in order again, as supreme minister, to execute the decrees of the divine legislator. They are struck with horror when they hear the archangel's name blasphemed by Moslem or Christian; and the sentence of death is said to be pronounced against those amongst them who take the name of "Satan." Those who hear it are bound to kill, first the blasphemer, then themselves. They scrupulously comply with the orders of their priests, and many make the pilgrimage to the shrine of Sheikh Adi, on the route to Amadiah, north of Mossul. Their pope, or Sheikh-Khan, resides at Baadli; but the sanctuary is in the village of Lalest, where lived a prophet, the "Mohammed" of the Yezidi. Here are performed the great ceremonies, and here the holy effigy of the melek Taus is exposed to the veneration of the faithful. Travellers, and even Christian missionaries amongst them, unanimously represent the Yezidi as far superior, morally, to their Nestorian or Gregorian, Shiah or Sunnite neighbours. They are perfectly honest, showing a scrupulous

regard for the property of others. They are also extremely courteous to strangers, kind to each other, faithful to the marriage vow, and of industrious habits. The songs sung by them while tilling the land, or during the evening rest from labour, consist either of fragments of epic poems celebrating the great deeds of their forefathers, love ditties full of sentiment, or else plaintive appeals for redress. "The jackal preys only on carrion; but the pasha drinks the blood of our youth. He severs the young man from his betrothed. Cursed be whosoever two loving hearts sever. Cursed be the ruler to pity a stranger. Its dead the grave gives not up, but the angel of doom our cry will hear!"

Of the Christian sects surviving in Kurdistan, the most important is that of the so-called Nestorians, a title, however, which they reject, calling themselves

Fig. 64.—Catholic and Protestant Missions amongst the Nestorians and Chaldeans.

Scale 1 : 5,500,000.

Yezedi. Chaldeans. Jacobites. Nestorians. Kizil-bash.

Catholic Missions. Protestant (American) Missions.

60 Miles.

"Messianic Nazarenes," "Syrian Nazarenes," or simply "Nazarenes." Their language is an Aramean dialect derived directly from the Syriac; hence the surprising facility with which they learn Hebrew, which the missionaries have introduced into their schools. Numbering, perhaps, 200,000 altogether, they are scattered, like the Yezidi, over a vast territory; and to them probably belonged the now extinct Nestorians of China, as well as the Nassareni-Moplahs of the Malabar coast, whose liturgical language is the Syriac, and who recognise as their head the Babylonian patriarch residing in Mossul. Their diffusion to such remote regions doubtless preceded the occupation of Mesopotamia by the Moham-

medans, who did not invade the Julamerk highlands between lakes Van and Urmiah, where the Nestorians had their strongholds and most important communities. But in 1843 their villages were overrun by the surrounding Mussulman Kurds, who massacred the men taken in arms, carried the women into captivity, and brought up the young in the Mohammedan faith.

At present the Porte has no more loyal subjects than the surviving Christians of Julamerk, who, like the neighbouring Kurds, are divided into two classes, the *assireta*, or nobles, and the peasants, little better than slaves. They are governed by a sacerdotal hierarchy, under the patriarchate of a priest-king known as "Mar Shimun," or "Lord Simon." The Nestorians trouble themselves little with the theological subtleties on the human and divine nature of Christ which gave rise to the schism of Nestorius. But ceremonial differences have sufficed to create secular hatreds between them and the other religious sects. The Chaldeans of Mesopotamia and Zagros, who are settled mostly in the Diarbekir district and north of Bagdad, have been united at least officially to the Church of Rome since the sixteenth century. Nevertheless they retain various old rites, and celibacy is restricted to the higher orders of the clergy. Recently, however, some of the Catholic missionaries have been endeavouring gradually to assimilate the Chaldean to the Latin ritual. On the other hand, the Nestorians, who remained faithful to the old Nazarene cult of Syria, have since 1831 been brought chiefly under the influence of the American missionaries. These Protestant evangelisers maintain about sixty stations in the country, contribute to the support of the native clergy and schools, and have more than once protected their highland congregations from the Turks and Kurds.

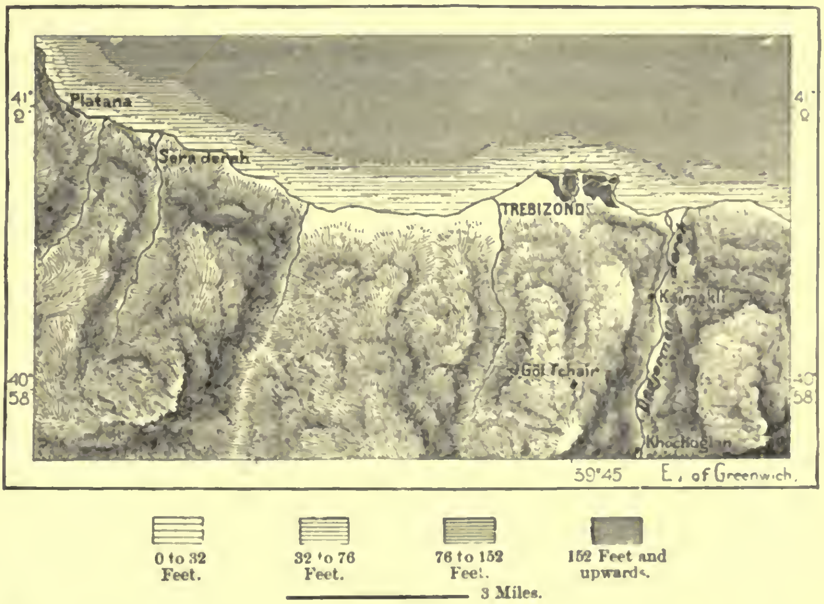
Topography.

There are comparatively few towns in these upland regions, which have been so frequently wasted by pillage, famine, and military expeditions. Half the population still leads a semi-nomad existence between the winter and summer pastures, residing during the heats in felt tents 15 to 20 feet high, for the rest of the year in hovels half buried in the ground, with grass-grown roofs rendering them almost indistinguishable from the surrounding land. Some of the powerful Kurdish chiefs possess large stone houses, but always so disposed as to keep in view the horses who form their main pride and delight.

West of Batum and the Chorukh delta, recently ceded to Russia, no town of any consequence occurs for a distance of over 90 miles along the coast. *Atina*, an old Greek colony, formerly known by the name of Athens, consists of a few scattered houses, and in the neighbourhood some mural remains mark the site of *Eski-Tirabzon*, or Old Trebizond. West of Atina follow the open roadsteads of *Rizeh*, *Of*, and *Surmeneh*, beyond which comes the famous city of *Trebizond*, the Trapezos of the Greeks, founded some 2,600 years ago by a colony from Sinope. Trebizond was the capital of Pontus, and in the thirteenth century became the metropolis of the empire which was founded by Alexis Comnenus, and which for over 250 years

arrested the progress of Islam. Although now merely a provincial capital, it preserves a certain importance as the outlet of Persia on the Black Sea. Notwithstanding its unsheltered anchorage, it has at all times been the port where passengers and goods are landed for the Iranian plateau, and where the produce of Persia is shipped for the West. The route, carried southwards over the rugged intervening highlands, is essentially a historic highway, the shortest and easiest between the Euxine and North Persia by the Bayazid Pass and the plain of Erzerum. The section between Trebizond and Erzerum now forms a fine carriage-road 200 miles long, accessible even to artillery. But the Trans-Caucasian railway from Batum and Poti through Tiflis to Baku, which must sooner or later be continued round the Caspian seaboard to Persia, is already threatening to deprive Trebizond

Fig. 65.—Trebizond.
Scale 1 : 215,000.



of most of its trade. Nevertheless the imports and exports were still valued in 1881, at £1,733,000 and £1,000,000 respectively; and since the interdict imposed by the Russian Government on the Caucasian transit trade, the French sugars and English woven goods intended for the Persian market have again been diverted to the old route over the Armenian plateau.

Of the old ramparts, built in form of a trapezium, whence the name of the city, the lines are still marked by several ivy-clad towers and a ruined castle on the coast. The modern quarter of Ghiaur-Meidan, lying beyond the walls on a cliff east of the town, is occupied by Armenians, Greeks and the European merchants settled in the place. Here is also a considerable Persian colony, which supplies nearly all the local artisans. In an enormous cave on the Kolat-dagh hills south of Trebizond is the famous Panagia of Sumelas, the Miriam ana, or "Mother Mary," annually visited by 8,000 or 10,000 Greeks in the month of August. Even the

Turkish women flock in large numbers to the shrine to implore her intercession against fever or sterility. She can dispel all calamities, but is especially potent against locusts, whence the title of "Panagia of the Locusts," by which she is known from Paphlagonia to Cappadocia. To the monastery belong extensive domains along the Euxine seaboard between Trebizond and Constantinople.

West of Trebizond other Greek names recall the days when Hellenic influence predominated on the coast of Pontus. *Tireboli*, or *Tarabulus*, is one of the numerous *Tripolis* or "Three Cities," whose walls afforded a refuge to people of threefold origin. It has the advantage over Trebizond of lying at the mouth of a considerable stream, the Kharshut, which, however, flows through gorges too narrow to allow of a road being opened along its course. Farther on is the little seaport of *Kiresun*, the old Greek settlement of Kerasos, so named from the Armenian *keraz*, cherry, whole forests of which tree formerly encircled the town. But the staple exports at present are filberts, of which 3,500 tons, valued at £60,000, were shipped for Russia and other places in 1881.

Between Trebizond and Erzerum the chief station is *Baiburt*, which lies at the foot of the Kop-dagh on the eastern head-stream of the Chorukh. Like most other upland towns in Turkish Armenia, it is little more than a collection of hovels and ruins, commanded by a strong citadel dating from the Seljuk period. In the neighbourhood is a still finer castle, the Ghenis-kaleh, built by the old Genoese traders on the highway to Persia. The silver mines in the vicinity, as well as those of *Gurmish-khaneh*, lying further west in the upper Kharshut basin, are no longer worked, having been partly flooded since the middle of the present century, when they were the most productive in the Ottoman empire. The copper mine situated some 12 miles to the south-east of Baiburt, at one time employed 500 hands, and its deepest shaft descended 1,300 feet into the ground. The whole valley of Chorukh is strewn with the ruins of castles, churches, and towns. Yet the entire district might be changed to a vast garden, like the lateral valley of *Tortuni*, which supplies Erzerum with fruits and vegetables. In the neighbourhood stand the church and monastery of *Erek Vank*, the most remarkable monument of Georgian art.

Erzerum retains some of its former importance as the most advanced bulwark of Turkey towards Russia, and as the converging point of the caravans crossing the Armenian highlands, or radiating from this point towards Trebizond and Batum, Sivas and Diarbekir, Bagdad, Teheran, and Tiflis. The transit trade between the Euxine and Persia has greatly diminished since the completion of the Trans-Caucasian railway from the Black Sea to the Caspian; and after the Russian invasions of 1829 and 1877, the most skilful and industrious Armenian artisans, notably the workers in metal, left the city in the wake of the conquerors. Thus deprived at once of its trade and industries, and threatened with further aggression and political changes, Erzerum has in recent times suffered greater losses than most other Turkish towns. It is also avoided by strangers, owing to its excessively severe winter climate. Lying at an altitude of 6,500 feet above the sea, in a treeless, marshy plain, its streets are blocked by snow for more than half the year. But during

the summer months it presents a more inviting aspect, with its amphitheatre of mountains and snowy cones, the grassy slopes of the lower hills, and the cultivated tracts of its fertile and well watered alluvial plain.

The isolated hill crowned for centuries by the citadel of Erzerum, explains the choice made of this spot for strategical purposes. The ancient Armenian trading city of *Arzen* stood farther east. The fort of *Theodosiopolis*, erected at the beginning of the fifth century above the city of *Garin* (*Karin*), also took the name of Arzen, or *Arzen-er-Rum*, that is, "Arzen of the Romans" (Byzantine Greeks), whence the modern Erzerum. Few places have been subject to more frequent

Fig. 66.—Erzerum.
Scale 1 : 640 000.

12 Miles.

assaults than this stronghold, which was successively taken and retaken by the Persian Sassanides, by the Arabs, Mongols, Turks, and Russians, belonging in turn to every nation except the people in whose territory it stands. According to the vicissitudes of war, the population has fluctuated enormously. Before the siege of 1829, Erzerum is said to have contained 130,000 inhabitants, who were reduced the following year to 15,000. Its only striking monuments are the picturesque gray basalt citadel, and the mosque of the "Two Minarets," covered in the Persian style with enamelled porcelain. With the exception of leather-dressing, and some metal works, the local industries have almost disappeared, and the neighbouring

mines are now closed. Yet this is the traditional home of the first workers in metal, those Tibarenians and Chalybes, who forged arms, and bronze and iron instruments, at a time when their neighbours were still in the stone age.

West of Erzerum, the main route follows the banks of the Kara-su (Upper Euphrates) down to the hot springs of *Ilija*, the most frequented in Armenia, and across several populous basins alternating with narrow gorges. But for a distance of 120 miles no town of any size occurs, till the ancient city of *Erzenjan*, or *Erzingan* (*Erez*), is reached, which lies in a fertile plan watered by several small tributaries of the Euphrates. Even before the Christian era, Erez was famous as the sanctuary of the Armenian goddess, Anahid (Anaïtis), who became successively the Artemis of the Greeks, the Roman Diana, and the Panagia of the Christians, when the old temple was transformed to a church of the Madonna. Before the rise of Erzerum, Erzenjan was the chief city of the Haïk country, whence the Armenians take their national name of Haïkans; and even when visited by Marco Polo it was still a large place, where were produced the finest "bouquerans" (muslins?) in the world. But it was overthrown by an earthquake in 1667, when half of the inhabitants perished in the ruins. Lying at an elevation of 4,500 feet, it enjoys a milder climate than Erzerum, and on its fertile plain are successfully cultivated the vine, melon, and other fruits of the temperate zone.

Below Erzenjan, a bluff overhanging the Euphrates, before it plunges into the profound gorges lower down, is crowned by the walled city of *Kemakh*, where the kings of Armenia at the beginning of the Christian era had their finest temples, their treasury, state prison, and tombs. But a still more remarkable place is *Eghin* or *Akin*, which stands on the right bank of the Kara-su (Euphrates) above the confluence of the Chalta-chai. Here the river is deflected from its westerly course towards the Mediterranean, and begins to describe the series of bends through which it escapes from the Armenian highlands to Mesopotamia. In this romantic region Eghin occupies one of the finest sites in Western Asia, and has become a favourite retreat for the Armenian traders who have made their fortunes in Constantinople and in the cities of the lowlands. In the tributary Chalta-chai valley the chief place is *Dirrig* or *Dirrighi*, which is supposed to stand on the site of the *Nicopolis*, or "City of Victory," founded to commemorate the triumph of Pompey over Mithridates. Goître is very prevalent in these highlands, and especially in the Eghin district.

East of Erzerum the main route to Persia crosses the easy pass of *Deveh-boinu*, leading from the Euphrates to the Aras basin, and formerly fortified to protect the city against the Russians. Here is also the old fortress of *Hassan-kaleh*, now a mere collection of hovels at the foot of a hill crowned by the ruins of a fort wrongly attributed to the Genoese. Below Hassan-kaleh the route bifurcates near the Trans-Caucasian frontier, one branch running north-east along the course of the Aras to the town of *Khorassan*, and thence to Kars, the other winding up to the Deli-baba Pass and down to the valley of the Upper Murad, or Eastern Euphrates. Here are *Topra-kaleh*, almost entirely abandoned since the first Russian invasion; *Uch-Kilissa*, or the "Three Churches," a much frequented place of pilgrimage;

and *Diyadin,* at the foot of an ancient fortress at the junction of the head-waters of the Murad. Near Diyadin, now merely a ruined caravan station, formerly stood the great city of *Zahrawan,* destroyed by the Persians in the middle of the fourth century, when it is said to have contained about 80,000 inhabitants, of whom 50,000 were Jews.

Bayazid, which lies south of the main route to Persia, and of the water-parting between the Euphrates and Urmiah basins, replaced the old Armenian city of *Pakovan,* founded in the first century of the new era. The present town, which is named after its founder, Sultan Bayazid I., forms one of the most picturesque groups of ruins in Western Asia. The steep slopes are covered with an amphitheatre of buildings, above which rise a half-ruined palace and a graceful minaret, commanded by a strong citadel. Still higher up a red marble crag streaked in white forms, with a snowy crest, a suitable background to this romantic scene. The palace, built by a Persian architect, was, till recently, the finest in the Turkish

Fig. 67.—Upper Murad Valley.
Scale 1 : 250,000.

30 Miles.

empire. Porticoes, colonnades, and walls are entirely constructed of the rich red marble from the neighbouring hill; the interlaced arabesque and foliated sculptures display marvellous taste and delicacy, combined with a sobriety of judgment rare amongst Persian artists. The mosque has been degraded to a barrack; the neighbouring buildings have been rent, and a large portion of the city levelled to the ground, by earthquakes; but the graceful minaret still maintains its equilibrium. Convalescent fever patients were formerly sent from Erivan to enjoy the benefit of the pure air of Bayazid.

South and south-west of the old lacustrine basin, where the Murad is joined by the Sharian-chai from the Pasin plateau, the course of the Upper Euphrates has not yet been entirely explored, although traversed by numerous travellers. No great caravan route runs in the direction of this upland river valley, which is inhabited by fierce and formidable Kurdish tribes. Amongst the few centres of population in this wild region, the most noteworthy are *Melezgherd* (*Manazgherd*),

which supplies a great part of Armenia with salt from the Tuzla-su, or "Salt River," and *Mush*, capital of the Pashalik, watered by the Murad. Mush lies not on the river itself, but on an extensive lateral plain at the issue of a rocky gorge commanded by mountains, on which the snow lies for six months in the year. But lying 1,600 feet lower down than Erzerum, it enjoys a milder climate, in which fruit-trees and even the vine are cultivated. The ruined citadel was formerly the residence of those Mamigonians who were governed by princes from Jenasdan—

Fig. 68—Bayazid—the Mosque and the Ruined Quarter.

that is, China—during the first centuries of the vulgar era. In the Mush district were born two illustrious Armenians: Mezrop, inventor of the Haïkan alphabet, and Moses, the historian.

After its junction with the Kara-su, which flows from a "fathomless" crater in the plain of Mush, the Murad plunges into a deep gorge, forming a cataract, from the sound of whose roaring waters the neighbouring village of *Gurgur*, or *Kurkur*, takes its name. Although already very copious, the river is not yet

navigable below this point. Dashing against its rocky walls, the current here recoils in swift eddies, or descends in rapids over the reefs. At certain points the hills running athwart its course confine it to a very narrow bed between vertical walls or abrupt escarpments rising several hundred yards above the stream. Near the village of *Akrakli*, the Murad is only some twenty paces broad, and assumes the

Fig. 69.—Confluence of the Two Euphrates.

Scale 1 : 640,000.

12 Miles.

character of a regular river only after passing the town of *Palu*. But the attempts made to navigate it, from this place to the confluence of the two Euphrates, have hitherto proved unsuccessful. The current, which at *Palu* is still 2,880 feet above sea-level, is too swift for ordinary craft, which are here replaced by the *kelleks*, or rafts made of thin planks bound together with ropes and supported by inflated sheepskins. Six of these floats will carry four men over the eddies and rapids.

The last bridge across the river above Hilleh is at Palu, which is commanded by a picturesque citadel, traditionally attributed to the hands of genii. In the neighbourhood is a cuneiform rock inscription, and the district yields the best wine in Armenia. A little farther south are the important iron-works of *Sivan-maden*, where the hills and valleys are strewn with rich blocks of black ferriferous ore. Near Sivan-maden the water-parting between the Tigris and Murad lies within half a mile of the latter river, whose chief northern affluent is the Mezur-su. Near the junction is the wretched hamlet of *Mazgherd*, in which Taylor recognises the Iranian Hormuz-ghere, or "City of Hormuz." Here formerly stood a fire-temple, whose remains, visible at a vast distance, are still venerated by the neighbouring Kizil-bash and Armenian communities.

Below the confluence of the Murad and Kara-su, the main stream is still locally known as the Murad, a name said to be derived from the numerous forts erected on the surrounding hills by Murad I. The term Frat (Euphrates) borne by the Kara-su, is not usually extended to the united waters till they reach the plain. No large town has sprung up at the confluence, and *Kyeban-maden*, which stands on the left bank a little lower down, evidently owes its origin to the recently abandoned argentiferous lead mines of the vicinity. The cliffs here at intervals confining the stream to a narrow bed, also prevent the formation of roads, so that all the caravan routes, towns, and strongholds, lie higher up on the plateaux and in the lateral valleys. In the triangular space formed by the two Euphrates, the chief place is *Chemech-gadzak*, the ancient *Hierapolis*, which is enclosed on three sides by sandstone rocks, full of formerly inhabited caverns. On the western plateaux *Arabkir*, or "Arab Conquest," lies 2 miles south of *Eski-shehr* ("Old Town") in a depression encircled by black basalt scarps. This gloomy upland recess has been converted into a smiling garden by its industrious inhabitants, whose weavers import spun cotton from England for the local looms.

The peninsular district limited north by the Murad, west and south by the great bend of the Euphrates, is commanded by the fortified city of *Kharput* (*Karberd*), which overlooks a fertile and well cultivated plain, yielding all the fruits of the temperate zone. In the middle of this plain stands the town of *Mezereh*, known also as "New Kharput." The "Armenian College" founded at Kharput by the American missionaries, has become the chief centre of public instruction for the whole of Armenia and Kurdistan.

In the south-eastern section of the Armenian plateaux, the largest place is *Van*, which gives its name to the neighbouring lake. It stands about 2 miles from the east bank in a level plain, surrounded on the north, east and south by bare limestone hills. The city proper is enclosed on three sides by broad ditches, and a double rampart of crenelled walls flanked by towers. But the outer city, that of the *Baghlar* or "gardens," is far more extensive, stretching a long way across the fertile plain, which has given rise to the saying, "Van in this, heaven in the next world!" In summer nearly the whole population leaves the inner town for the suburban district, whose glories are mostly concealed by high walls from the passing traveller. The wine of the local vintages is light and very pleasant to the

TOWN AND CITADEL OF VAN.

taste. The native women weave a species of goat-hair waterproof moire antique, highly esteemed even in Constantinople. The walled town, like so many other places in Kurdistan and Persia, is sometimes known as *Shemiram* or *Semiram*. In this case, however, there is historical evidence to show that, before taking the name of Van, from an Armenian king, its second founder, it was specially designated by the title of *Semiramgherd*, or "City of Semiramis." The historian, Moses of Khorene, who saw the magnificent palaces attributed to the famous queen, states that she brought from Assyria sixty architects and 42,000 workmen, who were employed for five years in the construction of those palaces and gardens which became one of the "wonders of the world." Here Semiramis chose her summer residence in order to enjoy the pure air of the highlands. Although no trace

Fig. 70.—Lake Van.

Scale 1 : 1,500,000.

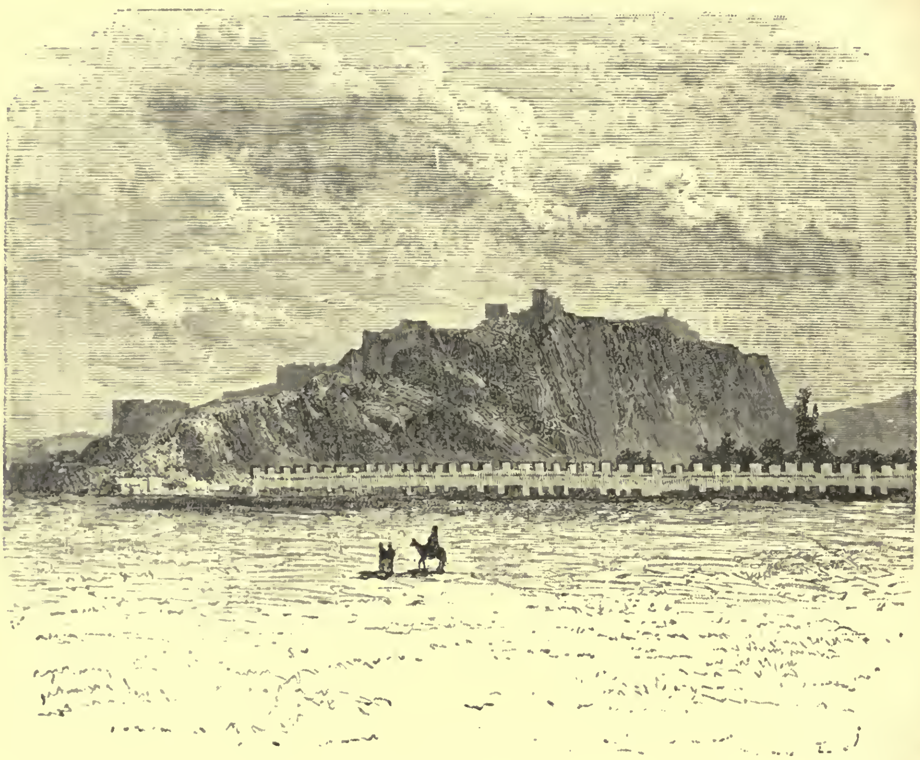
30 Miles.

remains of the Assyrian buildings, the rock of Van, which towers in isolated majesty above the terraced houses clustering at its foot, offers none the less an inexhaustible mine of wealth to the archæologist. This huge mass of nummulitic limestone, which is 2,000 feet long and about 100 high, comprises three main sections, all containing numerous galleries, flights of steps, crypts, and inscriptions. At all elevations the lines of cuneiform characters are visible on the bare rocky walls. Schultz, who was afterwards assassinated in Kurdistan, was the first to study them by means of a telescope erected on the top of a minaret. Rubbings were subsequently taken by Deyrolle, by means of ropes and ladders suspended in mid-air. One of the inscriptions, which, like that of Bisutun, is trilingual, relates almost in the same words the great deeds of Xerxes, son of Darius. But other far more ancient writings had long defied all efforts to interpret them, till they yielded

up their secret to the patient labour of Professor Sayce and M. Guyard. Their texts, composed in Old Armenian, are no longer a mystery, and the events here recorded in marble archives will gradually be revealed by these imperishable documents. But in the Van district there are other rock inscriptions, which still await an interpreter, for the attempt made by Sayce to find a key for their solution in the Georgian language of Trans-Caucasia cannot yet be regarded as entirely successful.

Topra-kaleh, another Assyrian stronghold, south-west of Van, has been recently explored by MM. Chantre and Barry. From the fortifications, which form three distinct systems of basalt walls and towers, a view is commanded of the vast

Fig 71.—Town and Citadel of Van.



amphitheatre of hills, and of the lake, in whose blue waters is mirrored the snow-capped cone of Seiban-dagh. Farther on, the town of *Akhlat* occupies a point on the lake, where the route to Mush and the Euphrates begins to ascend towards Lake Mazik. But little now remains of this formerly populous city, whose ruins are scattered amidst the surrounding gardens, and whose tombs are still to be seen hollowed out of the surrounding sandstone rocks. East of Van the town of *Erchek* overlooks the southern shore of Lake Erchek or Ertesh, beyond which runs the border range between the two empires. Here the "Cut-throat Pass," familiar to the marauding Kurds, leads down to the military station of *Kotur*, which belonged formerly to Turkey, but which, by the Treaty of Berlin, has been ceded to Persia,

together with a territory some 500 square miles in extent. The last Turkish valley in this direction is the lovely plain of *Abaga*, which begins at the southern foot of the Bayazid Mountains.

From Van is visible towards the south-west the hilly islet of *Aktamar*, which was formerly a peninsula, but is now about 2½ miles from the shore. To the Armenian kings, who long resided here, is due the church, dating from the tenth century, which stands in the middle of the island. It is the finest and richest in Turkish Armenia, and its patriarchs at one time claimed equal rank with those of Echmiadzin. In a river valley south of Van is another famous monastery, that of *Yeddi-Kilissa*, or the "Seven Churches," where young Armenians of good families are educated in a college, modelled, like the normal school of Van, on the training establishments of the West. The Armenians of this district are great travellers, thousands annually seeking employment in Constantinople and the cities along the Euxine seaboard, or visiting Bagdad, Aleppo, Vienna, Paris. The total number of emigrants was estimated at upwards of 30,000 in 1837, when the return movement averaged about 3,000

CHAPTER VI.

TIGRIS AND EUPHRATES BASINS.

LOWER KURDISTAN, MESOPOTAMIA, IRAK-ARABI.

THE section of Western Asia watered by the two great rivers Euphrates and Tigris, is one of those regions which differ most from the surrounding lands in their physical aspect and historic evolution. Nowhere else do the outward conditions show more clearly how the destinies of nations harmonise with their surroundings. The civilisation of Chaldea and the Assyrian empire find their explanation in the Tigris and Euphrates alone. And as the name of Egypt conjures up the image of the Nile, at first pent up between two deserts, and then broadening out in an alluvial delta, so are the great arteries of the rich Mesopotamian plains at once suggested by the words Babylon and Nineveh. The importance of the part played in history by the peoples dwelling between Taurus and the Persian Gulf was not due to any special ethnical qualities, for the nations that have been developed in this region were composed of the most heterogeneous elements. But Chaldea and Assyria were indebted for their long pre-eminence in the history of the old world precisely to this intermingling of races in an environment favourable for their fusion, as well as for their social and intellectual development.

The Iranian plateau, which skirts the plains of the Tigris on the east, is disposed like a transverse barrier, whence the running waters flow down to the lowlands. Mesopotamia itself forms a sort of emissary for the populations of the neighbouring uplands, who found easy access to the Tigris through its numerous lateral valleys. In the same way the inhabitants of the Armenian and Taurus highlands on the north and north-west, as well as those of the Mediterranean coast ranges, were all attracted towards the plains watered by the two great rivers. To all these immigrants from the surrounding plateaux it offered a vast and productive lowland region, where all the discordant ethnical elements could be blended in one homogeneous nationality.

Historic Retrospect.

As a historic highway, the united Euphrates-Tigris Valley occupied a position of supreme importance in the Old World. Here passes the route connecting the lines of coast navigation between India and the Mediterranean seaboard. The valley which continues across Western Asia the transverse fissure of the Persian Gulf, penetrates in a north-westerly direction towards the Mediterranean. Here it communicates through a breach in the intervening ranges with the Lower Orontes Valley, thus continuing the natural depression from sea to sea. Hence from the first rise of navigation the Euphrates naturally became the main highway between East and West, offering in this respect analogous advantages to those of the Nile Valley. Babylonia thus became the natural rival of Egypt for the trade of the world, and the powerful rulers of both regions have ever aimed at the conquest or suppression of the competing route. During one epoch at least, Mesopotamia appears to have acquired the ascendency, and two thousand five hundred years ago Nabuchodonozor, already master of Teredon, on the Persian Gulf, occupied Tyre on the Mediterranean, in order to secure possession of the whole route. The Euphrates thus becoming the chief commercial highway of the world, acquired even greater importance than the Red Sea and Nile Valley. But the Persian conquerors, familiar with the overland routes across the plateaux, and without experience of maritime affairs, arrested the movement between India and Mesopotamia.

Alexander, in his turn, fully alive to the value of the great lines of communication which fell into his hands as master both of Persia and Egypt, endeavoured to restore the Euphrates route. He removed the defensive works erected by the Persians, revived the port of Teredon, built fleets, and formed a basin at Babylon large enough to refit as many as one thousand vessels. Hence, not only during the Greek rule, but even after the time of the Seleucides, the Euphrates remained the chief line of traffic between East and West. Under the Arab caliphs, the Mesopotamian markets again acquired a prominent position in the trade of the world. And although this revival was followed by the silence of the wilderness under the Turkish rule, the first symptoms of returning prosperity seem to be already visible. The ebb of civilisation has set in towards the lands whence came the flow. Athens, Smyrna, and Alexandria have acquired new life, and Babylon will also rise from her ruins.

Including the whole historic period, Mesopotamia is one of those regions which have enjoyed the longest culture. When the Medes and Persians inherited the Assyrian sway, thousands of years had already elapsed since the Chaldean, Elamite, Babylonian, and Ninivite dynasties had succeeded each other, and since their institutions, religions, and languages, had accomplished their evolution on the Mesopotamian plains. The riverain populations of the twin streams dated their legendary history from the time of the great inundation which gave rise to the myth of the biblical deluge, and even their authentic annals begin over four thousand one hundred years ago. But before that now definitely fixed date, how

many generations must have elapsed to bring about the thorough fusion of Scythian, Iranian, Semite, and the other ethnical elements which gave birth to a culture marked by such uniformity in its religious, social and political aspects. Recent research even tends to show that the science of the Chinese, hitherto regarded as of spontaneous growth in Eastern Asia, derived its first inspirations from the banks of the Euphrates.* The magic of Babylon is found still practised by the Siberian Tunguses.

Such was the pre-eminence of Chaldean civilisation that the surrounding peoples placed between the two rivers the legendary land where the first men lived a life of innocence and pleasure. Like other nations, those of the Euphrates basin reserved their special veneration for the region whence came their arts and sciences, and in their eyes this region became glorified as a land of bliss, a "Paradise," or an "Eden," where death was unknown, where no tempting serpent had yet penetrated. As the Iranians turned their gaze towards the Elburz valleys, the Hindus towards the "Seven Rivers" overshadowed by Meru, so the Hebrews, of Mesopotamian origin, kept their eyes fixed on the land of great rivers, and their "paradise" was watered by the Tigris, Euphrates, and the not yet identified Pison and Gihon. Travellers ascending the Shat-el-Arab are still shown the site of paradise, where grow the palms of Korna at the confluence of the waters. Endless are the theories of archæologists and biblical interpreters regarding the exact position of the garden of happiness as described in the Jewish writings. But may it not be simply identified with the arable zone irrigated by the two rivers and their canals, beyond which lay the sandy wilderness? In the cuneiform inscriptions Babylonia is always represented by the names of the four streams, Tigris, Euphrates, Sumapi, and Ukni, probably the same as those of Genesis. The word Eden, or Gan-Eden, would itself appear to be identical with that of Gan-Duni, one of the names applied to the land of Babylon, consecrated to the god Duni or Dunia.† Since the discovery of the Zend and Sanskrit literatures, the name of "terrestrial paradise," localised by the legend in Aram Naharain, that is, "Syria of the Two Rivers," has become a floating expression applicable to Kashmir, Bactriana, or any other fertile region of Hither Asia.

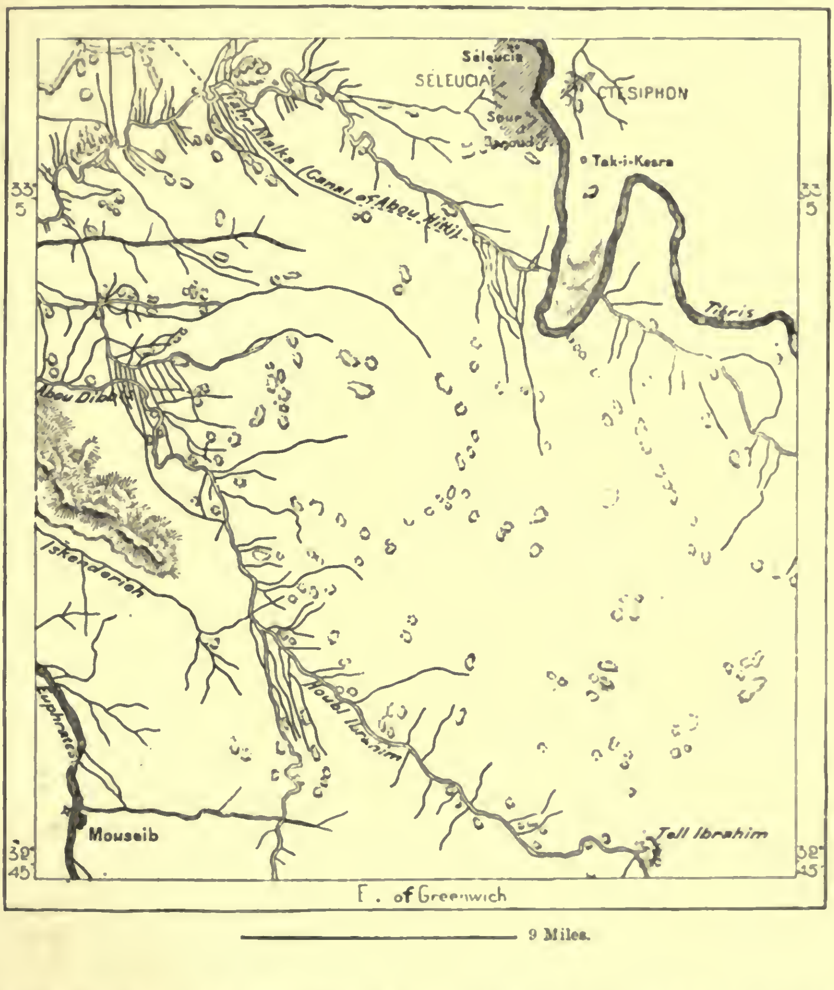
Chaldea, towards which those western dreamers turn their eyes who still believe in a golden age of the past, could not fail to exercise a vital influence on the religion of the peoples civilised by them. The sacred writings of the Jews, accepted by Christendom, embody numerous passages transcribed from the Chaldean books, and even fragments in the Babylonian dialect. The legends associated with the lives of the Patriarchs, the Flood, the Tower of Babel, and confusion of tongues, are identical in both literatures; while the cosmogony of Genesis differs little from that preserved in the surviving text of Berosus. But to the west Chaldea also bequeathed its secular science, its knowledge of the stars and their movements, the art of dividing time according to the revolutions of the heavens. She taught the western peoples how to weigh and measure accurately,

* Lenormant; Fritz Hommel; Lepsius; Terrien de la Couperie.

† H. Rawlinson, "Notes on the Site of the Terrestrial Paradise."

besides a thousand primary notions in astronomy and geometry, traces of which survive in modern nomenclature. In commerce the Chaldeans were probably the first to employ orders for payment indelibly inscribed on brick tablets, an invention which passed from Babylon to Persia, and thence through the Arabs to Europe.* Their influence made itself also felt in the arts and literatures of the peoples inhabiting the whole of the Euphrates basin, mainly, however, through

Fig. 72.—Mounds in the Tigris Valley, South of Seleucia.
Scale 1 : 425,000.



9 Miles.

the indirect action on the one hand of the Jews and Phœnicians, on the other of the Hittites, Cypriots, and Phrygians.

In no region of Hither Asia is the ground strewn with more numerous ruins than in Mesopotamia. For vast spaces the soil is in some places mixed with fragments of bricks and earthenware. The so called *tells* or mounds of rubbish are dotted in hundreds and thousands over the plains, while a few remains of towers and crumbling walls mark the sites of large cities, the very names of many

* Lenormant.

of which are now unknown. But, like the neighbouring nations, those of the two rivers have fallen from their former pre-eminence in consequence of the gradual westerly movement of civilisation towards the Mediterranean seaboard, and thence to Western Europe. Consisting of traders and agriculturists scattered over a plain exposed on all sides to the incursions of barbaric hordes, they were even less able to defend themselves than their neighbours. Their great cities were sacked and razed to the ground, and the population reduced to scarcely five millions in a region as large as France, and far more fertile wherever artificial irrigation is possible. And even of these more than one half are nomads, whose tents are pitched on the verge of the desert.

North Mesopotamian Orographic System.

Of Mesopotamia the natural limits are the advanced spurs of the Persian and Kurdistan border ranges on the east and north, and on the north-west the Tauric uplands, which have a normal south-westerly direction towards the Mediterranean, where they terminate in bold headlands. But within this vast amphitheatre of highlands, and even within the space enclosed by the twin rivers, the plains are intersected by several independent ridges, separated by profound fissures from the surrounding orographic systems of Kurdistan and the Taurus.

The Karaja-dagh, south of the narrow rocky isthmus which rises between the sources of the western Tigris, and the sudden bend of the Euphrates at Telek, runs in the direction from north to south, thus forming the chord of the vast arc described by the Armenian border ranges. It is separated by a pass 2,600 feet high from the Mehrab-dagh, an advanced spur of the Taurus, occupying the extreme angle of the interfluvial region. The Karaja-dagh is a huge mass of black basalt some 3,600 feet high, deeply scored by the beds of mountain torrents, such as the Karaja-chai, which flows from the north-eastern slopes to the Tigris below Diarbekir. Near the confluence it is joined by the Kuchuk-chai, another stream, whose right bank is skirted by a vertical basalt wall 230 feet high.

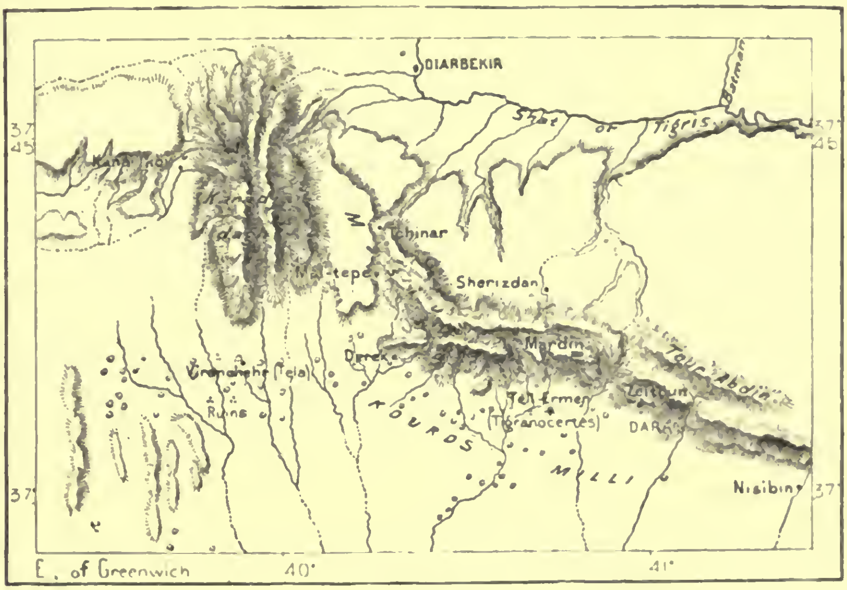
Farther west the Karaja hills merge in the Nimrud-dagh ("Nimrod Mountains") and other ridges ramifying towards the Euphrates, and rising at some points to a height 2,600 feet, or some 1,500 feet above the level of the lower plains. But in their western section these uplands assume mainly the aspect of plateaux. Such is the Kara-seka, a limestone table with a mean elevation of 2,400 feet, interrupted at intervals by crevasses, which terminate in circular cavities forming reservoirs for a little water during the rainy season.

Towards the east the Karaja-dagh is separated from the Mardin uplands by a wide fissure some 2,500 feet deep, which presents an easy route for travellers proceeding from Diarbekir to the steppes skirted by the river Khabur. A complete geological contrast is offered by the two sides of the gorge, which is skirted on the west by steep basalt cliffs, on the east by chalk and limestone formations, but the crests attain on both sides the same extreme altitude of about 5,000 feet, and are occasionally streaked with snow down to the end of April. The Mardin

Hills, the Masios of the ancients, are crossed by numerous passes about 3,300 feet high, leading from the Euphrates to the Tigris basin, while towards the west they are separated by a broad valley from the less elevated dolomitic Tur-Abdin mass, which is continued in the direction of the Tigris by the basalt Hamka-dagh and Elim-dagh. The Tur-Abdin crests are mostly treeless, and in many places destitute even of herbage. But the plain at the foot of the southern escarpment, being well watered by the mountain torrents distributed in a thousand channels, has been converted into an extensive garden, as crowded with villages as the best cultivated regions in Europe. Here the mounds formerly crowned by temples and defensive works are now generally encircled by poplars.

In this district the water-parting lies much nearer to the Tigris than to the

Fig. 73.—The Mardin Hills.
Scale 1 : 1,750,000.



c Artificial Mounds.

30 Miles.

Euphrates. It merges southwards in the Kara-chok and Butman heights, which skirt the Tigris, and cause its bed to deflect eastwards. The Butman ridge itself is connected at its eastern extremity with the Sinjar, or Singali Hills, a low but conspicuous chain, penetrating south-westwards far into the steppes of central Mesopotamia. From the river banks nothing is here visible except the rocky escarpments of these Sinjar Hills, which stretch through the Jebel Akhdal, and Jebel Aziz, beyond the Euphrates westwards to the Jebel Amur, Jebel Ruak, and Anti-Lebanon.* Although rarely visited, the Sinjar supports a considerable population, thanks to the rains which feed the brooks on its slopes. The plains stretching thence westwards to the Euphrates were in the ninth century the

* Anne Blunt, "Among the Bedouins of the Euphrates."

scene of a great scientific event. Here was measured a degree of the meridian by a group of Arab astronomers, who found that the degree was 56⅔ Arab miles long. The precise value of this mile has not been determined; but in the calculation there appears to have been an error, according to some of one-tenth, to others of one-fiftieth only, in excess.

South of the Sinjar, the Mesopotamian plains are broken only by low mounds, nearly all artificial, and by rocky tables eroded by intermittent streams. But east of the Tigris the land rises everywhere to lofty ranges intersected by the tributaries of the river. These highlands, which belong geologically to the Iranian system, run north-west and south-east, parallel with the Persian border ranges whose snowy peaks are visible from the Bagdad lowlands. North-east of Mossul

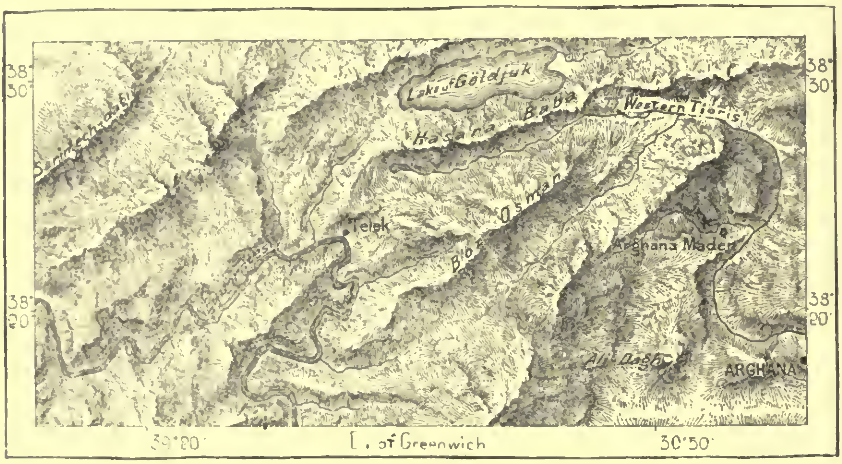


Fig. 74.—Source of the Western Tigris.

Scale 1 : 600,000.

12 Miles.

the more irregular uplands converge at several points in mountain masses with numerous peaks exceeding 13,000 feet in altitude. Such is the Tura Jelu, east of the Great Zab, which, according to Layard, has an elevation of over 14,000 feet. The main ridge, crossed at great intervals by a few passes, and overlooking the villages and camping-grounds of the Hakkari Kurds, runs from the lakes south of Lake Van to the Persian border chains between the sources of the two Zabs. In this north-eastern corner of Mesopotamia the Kurd domain is limited by the sandstone Jebel Hamrin, an almost geometrical square mass, furrowed by no less regular river gorges. All the highlands skirting the Mesopotamian plains are known to the Persians by the collective name of Pusht-i-kuh, an expression which occurs on many maps, but which belongs to no range in particular. It simply means the "mountains beyond."

The Tigris Basin.

The Tigris, the shortest of the two rivers whose united waters flow through the Shat-el-Arab to the Persian Gulf, rises in the neighbourhood of the Euphrates. The chief sources spring from the Utch-göl or "Three Lakes," near the Sivan mines, within half a mile of the deep gorge traversed by the Murad; and the united stream flows south-west towards the Euphrates. But it is intercepted by another watercourse, also rising near the Euphrates, by which it is deflected southwards. This is the Dijleh, which is regarded as the main branch of the Tigris, and which at first traverses the peninsular region formed by the windings of the Euphrates round three sides of the upland Kharput plain. Rising within a few miles of one of these sharp bends, the Dijleh begins by seeking an outlet from the vast circuit thus described by the rival stream. The Göljuk, Goljik, or Gölenjik, a brackish lakelet, here occupies a depression in the plateau some 200 yards higher up, whence emissaries flow both to the Tigris and the Euphrates. At least the level of the Göljuk was recently raised by a series of wet seasons so high that its surplus waters found an outlet at its south-east end towards the Tigris. A cutting has even been undertaken to regulate the discharge, and convert the lake into a constant affluent of the river.* Thus have the two streams been made to intermingle their waters, as if to confirm the accounts of the old writers.

On reaching the Diarbekir plains, the Shat or "River," as the Tigris is here designated, is rapidly swollen by the contributions received from the northern highlands. The Batman-su, one of the largest of these, resembles the main stream in the impetuosity of its current, and like it, takes its rise near the Upper Euphrates on the southern slope of the Mush hills. Lower down comes the Arzen-su, and the Bohan-su, with its romantic affluent, the Bitlis, from the heights skirting the south-west corner of the Van basin.

Below the junction of the two Shats, that is, the Dijleh or Western, and Botan, or Eastern Tigris, the main stream, already developed to one half of its full volume, turns south-eastwards to a rugged region where it flows for a space of about 40 miles through a series of profound limestone and basalt gorges. Beyond this point it merges on an open alluvial plain, but soon plunges again into a series of wild and inaccessible ravines. Here also the tracks leave the river banks, making long detours over the hills to avoid both the main stream and the lower course of the tributaries, all of which flow through gorges 45 or 50 feet deep.

Throughout the series of defiles, which begin at the Botan-su confluence and terminate above Mossul, the Tigris maintains the normal direction parallel with the border ranges of the Iranian plateau, which it preserves to its junction with the Euphrates. Throughout its whole course it receives large affluents only on its left bank, the drainage on the opposite side being almost exclusively to the Euphrates. But some of these affluents themselves occupy basins of considerable extent. Such is the Great Zab (Zarb-el-Kebir), whose head-streams drain the whole region comprised between Lakes Van and Urmiah. The Little Zab (Zarb Saghir) also sends

* Fanshawe Tozer, "Turkish Armenia, and Eastern Asia Minor."

down a copious flood, some of which comes from beyond the Persian border. The Diyalah also, which joins the Tigris below Bagdad, receives numerous feeders from Persia, where they take their rise in the parallel depressions of the frontier ranges. Like the Tigris itself, the tributaries have to pierce a series of parallel mountain barriers before escaping from their old lacustrine cavities down to the Mesopotamian plain. On issuing from the upland Kurdistan valleys, the Great Zab flows east of Mossul through masses of conglomerate, in a broad bed in some places over half a mile from bank to bank. The Little Zab also reaches the Tigris through a succession of mountain gorges. South-east of a so-called "Gate of the Tigris," a fissure from 160 to 230 feet deep affords an outlet for the waters of the Diyalah across the red sandstone formations of the Hamrin. Here the water collects during the rainy season in a temporary lake on the Kizil-robat plain above the ravine. The Adhim, another affluent of the Tigris, flowing from the Pir Omar Gudrun, a holy mountain 8,300 feet high, forms a permanent morass above the Demir-kapu or "Iron Gate," by which it is separated from the alluvial plains of Mesopotamia.

Below all its tributaries the Tigris overflows its banks at several points, and sends eastwards the sluggish Hadd, which forms a junction with the Kerkha of Luristan. In winter the whole plain stretching from the Lower Tigris to the advanced spurs of the Persian highlands is converted into an inland sea, often ironically called the "Umm-el-Bak," or "Mosquito Sea." In summer there still remains a network of winding channels, navigable by boats for nearly 100 miles between the Tigris and Kerkha.

At its junction with the Euphrates at Korna, the Tigris, contrary to the statement of Strabo, is the more copious of the two rivers.* Between its source and mouth at the confluence, it has a total length of about 1,200 miles, or one half that of the Euphrates, while the extent of its basin is also much less. But instead of winding through the desert, like the Euphrates after leaving the Taurus highlands, the Tigris continues to skirt the western escarpments of the Iranian plateau, whence it receives numerous feeders along its whole course. Rising many hundred feet above the Euphrates Valley, and pursuing a less winding, but more precipitous course towards the Persian Gulf, it has a very swift current, whence its old Persian name of Tigris, or "Arrow," which has replaced the Assyrian Hiddekel (Idiklat), still surviving in the Armenian Dikla and Arabic Dijleh. Owing to its greater velocity, it also loses less water by evaporation, and develops fewer stagnant pools and swamps along its banks than does the Euphrates. It is ascended as far as Bagdad by steamers of light draft, which might even penetrate to Tekrit, 600 miles from the sea. From that point to Mossul it is open only to small boats, and thence to Diarbekir the only craft found on its waters are the kelleks, or rafts formed of planks with inflated sheepskin floats. De Moltke and Mühlbach were the first Europeans to descend its stream on these frail craft, and thus explore the grand defiles through which the Tigris escapes to the plains.

* Mean discharge of the Tigris at Bagdad, 163,000 cubic feet per second; of the Euphrates at Hit, 72,000 cubic feet.

The Euphrates Basin.

Below the junction of its two head-streams, the Murad and Frat, or Kara-su, the Euphrates has already received most of the supplies that it discharges at the Tigris confluence. The head-streams have each an average width of about 350 feet, with a depth of nearly 4 feet, and a velocity of 10 feet per second. During the floods, that is, from the middle of March to the end of May, it usually rises some 15 or 20 feet, and occasionally much higher. Before leaving the hilly region, the main stream still receives a few tributaries about the point where it describes the great bend west of the last spurs of the Taurus. Here the drainage of the Armenian highlands had formerly been collected in a lacustrine basin, whose old beach is still visible on the surrounding escarpments, and the alluvial deposits from which have enriched the Malatia plains. Few districts in Hither Asia have a more productive soil than this depression, which, however, is also one of the unhealthiest in Asiatic Turkey. Of the streams here joining the Euphrates from the western slopes the most copious is the Tokma-su, the Melas of the ancients, whose farthest sources are intermingled on the water-parting with those of the Jihun or Cilician Pyramus, which flows to the Mediterranean The fertile Tokma-Euphrates plain lies exactly mid-way between Constantinople and Bagdad, and thus forms a central resting-place on this main route of the empire. Other historic highways also traverse the same basin, which forms the natural converging point between Armenia, Syria, Asia Minor, and the lower Euphrates. Forming the western continuation of the Upper Tigris Valley, it also offered the easiest line of communication for caravans and armies proceeding from Persia to the Ionian seaboard. Sculptured cuneiform inscriptions on a rock overlooking the Euphrates, where it was crossed by the main route, record the great deeds of some now forgotten Persian conqueror, whose name still remains undeciphered.

In the Malatia basin the Euphrates, still at an elevation of 2,800 feet above the sea, is separated from the lowland plains by the barrier of the Taurus. Turning first eastwards along the northern foot of the hills, it soon bends south-eastwards between rocky escarpments over 1,650 feet high. Here begin the "cataracts," to which the Turks have given the name of the "Forty Gorges." For a space of 90 miles some three hundred rapids follow in such close proximity, that in many places after escaping from one the boatman hears the roar of the waters rushing over the next. At times the floating ice collecting about these rocky ledges presents a temporary bridge to the riverain populations. The dangers attending the navigation of this section of the stream vary with the height of the water, which sometimes flows in one sheet down an inclined plane, sometimes in cascades from ledge to ledge. Right and left the stream is joined by foaming mountain torrents, whose ravines often afford glimpses of the upper terraces, here clothed with a grassy sward shaded by widespreading walnut-trees.

One of the most dangerous of the cataracts is the first of the series on leaving the Malatia plain, where there is a fall of 16 in a space of 180 feet. Other formidable rapids follow near Telek, at the point where the Euphrates, turning abruptly

to the south and south-west, flows beneath the plateau on which the western Tigris takes its rise some 1,300 feet higher up. Here the sulphur-charged waters, issuing from a fissure in the rock, are revealed at a distance by the wreaths of vapour rising above them. Lower down the stream is contracted by a projecting bluff from a mean width of 650 to about 40 feet. This defile is known as the Geik-tash, or "Stag's Leap," and one of the last of the series has been well named the Gerger (Gurgur, Kharkar), that is, the "Roarer." Nevertheless the cataracts have been run more than once, as in 1838 and 1839 by Von Moltke, at that time employed by the Turkish Government to survey the ground, and study the means of transporting military supplies along this route. On the first occasion he passed through safely; but in the second trip, undertaken during the floods, he escaped with difficulty from the rapids at Telek.

On issuing from the gorges of the Armenian Taurus, the Euphrates skirts this range first on the east and then on the south, receiving from its slopes numerous torrents, and still forming a few rapids above the village of Kantara. Here the valley continues to be confined especially on the right side by chalk or limestone cliffs 300 or 400 feet high. But from their summit a view is already commanded of the open Mesopotamian plains and the great river winding away between its sandy banks westwards. For the Euphrates in this part of its course is still flowing towards the Mediterranean, to which it approaches within 95 miles at the last bend between Rum-Kalah and Birejik. At this important historical spot converge the natural highways between the sea and the river. The very name of Rum-Kalah, or "Castle of the Romans," indicates the importance attached by the Romans or Byzantines to this part of the river valley, known to the ancients as the Zeugma, the yoke or link between east and west. Higher up, the stream had been bridged at various times, and in 1836 Lynch discovered some remains, which seemed to be connected with these works. Lower down the chief crossing for caravans is at Bir or Birejik, where as many as five thousand camels have at times been detained waiting for the ferry-boats. As far as Balis, 90 miles still farther down, the Euphrates continues to run nearly parallel with the Mediterranean; but here it at last bends to the south-east, henceforth flowing obliquely across the Mesopotamian plains to the Persian Gulf.

The level plains on both sides are diversified by moderately elevated cliffs, especially along the right bank, where the erosive action of the stream is most felt. Here and there the hills terminate in bluffs overlooking and even contracting the bed of the river. Thus the Euphrates below Deir is deflected by the Jebel Abyad (White Mountain), westward to the gorge where it is joined by the Khabur. Below Anah, and as far as Hit, the limestone cliffs skirting its course approach so near that no space is left for houses or gardens. Villages, such as Hadidha, El-Uz, Jebah, and others, are either excavated in the rock itself, or else occupy the rocky islets in mid-stream, built like strongholds above the level of the summer floods, which here rise some 24 feet above the winter low-water mark.

Navigable throughout a portion of the year, at least for steamers of light draft, the Euphrates from Birejik to the sea has a fall of scarcely more than 8 inches in

THE EUPHRATES AT BIREJIK.

the mile. Hence it flows very gently, especially in the dry season between the end of autumn and beginning of winter. Like the Nile, it also diminishes continually in volume throughout its whole course across the Mesopotamian plains below Birejik. At Hadidha it is fordable even for the villagers, and for camels at many other points, where the depth scarcely exceeds 5 feet. It is doubtless joined on both banks by a few affluents, such as the Sajur from the Tauric range, the Nahr-

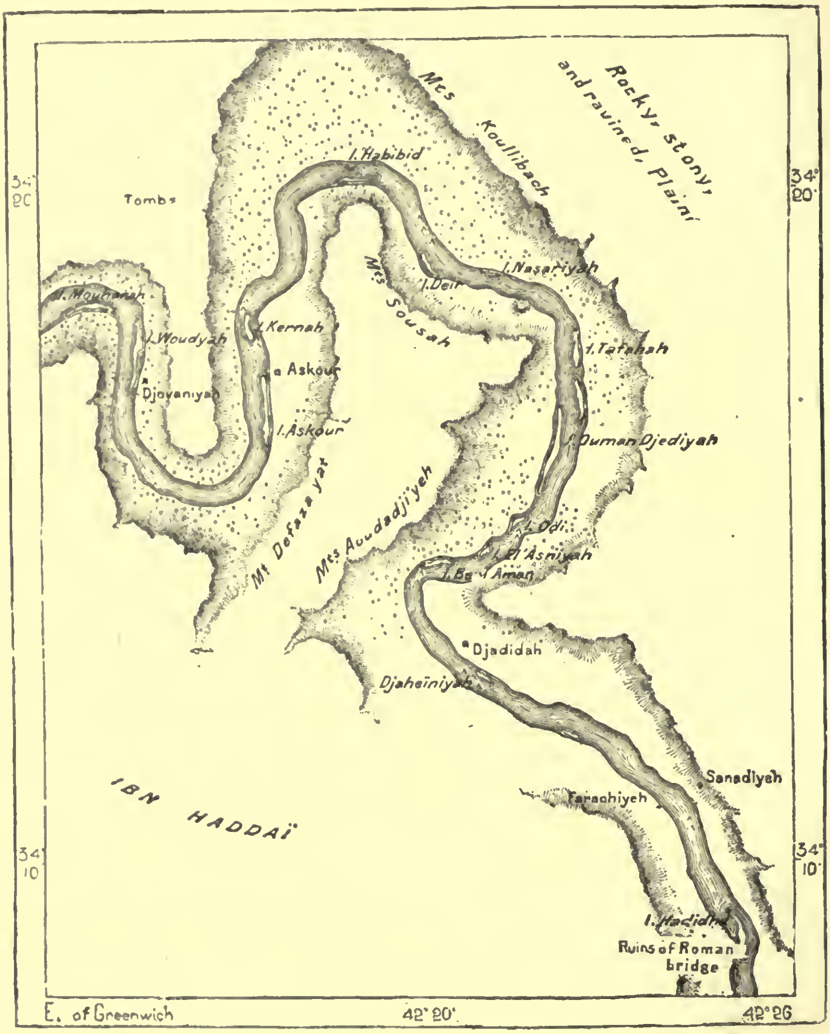
Fig. 75.—Caravan on the Banks of the Euphrates.

Balik from the Urfa hills, the Khabur from the Tur-Abdin heights. But with the exception of the last-mentioned, the torrents reaching the middle Euphrates send down a considerable volume only during the rainy season. The other tributaries are mere wadies, dry throughout most of the year, and when flooded mostly used up in irrigating the surrounding fields. Several of these intermittent streams are thus completely absorbed by the reservoirs, or else are lost in the marshes. Such is the Wad-Ali, which rises near Palmyra, and which although fully 180 miles long,

presents generally the appearance of a dry watercourse. Such also are the Gharra and Hauran, whose broad beds, winding between high cliffs, are little better than quagmires even in summer. But all these wadies of the Syrian desert are vastly exceeded in extent by the Er-Rumen or El-Nej, which rises within some 30 miles of the coast of Madian, and after describing a great bend southwards into the heart

Fig 76.—Windings of the Middle Euphrates.

Scale 1 : 123,000.



3 Miles.

of Arabia, falls ultimately into the Lower Euphrates after a course of at least 1,200 miles. This "waterless river" attests the great changes of climate that have occurred since the time when the rains were copious enough to develop such a mighty watercourse across the eastern slope of Arabia. If account be taken of all the ephemeral streams flowing from the centre of the Arabian peninsula towards Mesopotamia, the basin of the Euphrates and Tigris, usually estimated at nearly

200,000 square miles, will have to be increased by fully a third. The mouths of the wadies are at times dangerous to pass, even when their dry beds seem perfectly level. During the great heats the ground becomes fissured by wide and deep crevasses, which the first rains, charged with fine sand, cover with minute particles of silicate no thicker than a sheet of paper. The space enclosed by the Kubeissieh and Mohammedieh wadies, which join the main stream from the western steppes immediately below the town of Hit, is occupied by vast layers of a bituminous soil covered with clay and gypsum. Countless grey eminences, dotted over the plain like the tents of a camping-ground, discharge from their bases smoking streams of asphalt with a mean temperature of from 75° to 85° F. The viscous fluid winds sluggishly over the surface towards the Euphrates.

At the point where the western artery approaches nearest to the Tigris, and where the twin rivers run parallel, at a mean distance of 20 miles, the Euphrates flows at an elevation of about 16 feet higher than the Tigris, and consequently supplies the irrigation canals of the intervening plain. It appears at some former time to have even joined the Tigris, the slope between the two being uniform and interrupted by no intermediate heights. But the constant erosions in its right bank, and the accumulation of alluvia on its left, caused the two channels gradually to diverge, although still connected by lateral streams. The volume of the Euphrates thus continues constantly to diminish, and much of its waters also escapes through the ill-kept embankments to the surrounding plains, where they develop reedy marshes of vast extent. Above Babylon its course has been repeatedly shifted, now to the right now to the left, sometimes spontaneously, more frequently at the pleasure of Nitocris, Cyrus, Alexander, or other conquerors. During the epoch of the Seleucides, the main channel still flowed east of a slight elevation directly south-west of Bagdad, and winded through the plain within 15 miles of the Tigris. Along this old bed are found nearly all the heaps of refuse marking the sites of former cities, no ruins of which have been discovered on the banks of the present channel. Some 50 miles south of the original bifurcation begins the branch known as the Hindieh Canal, said to have been so named from an Indian nawab by whom it was repaired in the last century, although it appears to have existed under other names at a former period, when many cuttings were made to regulate the discharge. At present the Hindieh Canal diverts nearly half of the main stream westwards to the vast "sea" of Nejef. In this marshy reservoir much is lost by evaporation on its emerging to rejoin the river lower down. Owing to all these ramifications, it has become difficult to recognise the branch which ought to bear the name of Euphrates, which amid the Lamlun swamps is scarcely 250 feet wide from bank to bank. In the dry season it shrinks to 14 or 15 feet, with a depth of scarcely 2 feet, and when descending this channel Kemball and Bewsher had often to drag their boat through the mud and reeds at places where thirty years previously Chesney's steamers had found from 15 to 20 feet of water.

Farther down the Euphrates resumes its normal proportions, thanks to the Hindieh branch and to the riverain canals, as well as to the Tigris itself, which, by a remarkable phenomenon, after receiving the overflow of the Euphrates, becomes

in its turn a tributary of its rival. The canalisation system is, however, everywhere so defective that many channels, instead of ramifying into secondary rills and cuttings, become lost in vast pestiferous morasses. During the floods the dykes above Bagdad often give way, isolating the city from the eastern uplands for months together by a broad sheet of water dotted over with solitary eminences, where the riverain populations take refuge. The inundations are now no longer

Fig. 77.—The Euphrates and Lake Nejef.

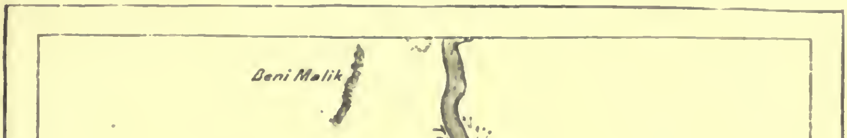
Scale 1 : 875,000.

18 Miles.

controlled by all those lateral canals, which communicated with inland reservoirs, and thus protected the lower plains while harbouring the superfluous waters for the dry season. The eastern affluents of the Tigris, having a greater incline, are more suitable for irrigating purposes than the main stream. To the waters of the Khalis, a branch of the Diyalah, the plains of Bagdad are indebted for their exuberant vegetation. Here have for the first time been successfully introduced the improved European methods of irrigation.

Efforts have at all times been made to established a sort of mystic contrast between the two great Mesopotamian arteries. In the marriage of the converging streams, the Euphrates thus represents the male, the Tigris the female element. Several miles below the confluence, the difference is still perceptible between the two currents in the Shat-el-Arab. The less copious and more sluggish Euphrates sends down a warmer, more limpid, and regular stream, depositing its alluvia in the riverain marshes, while the Tigris keeps its sedimentary matter much longer in solution. Korna, where the confluence takes place, forms the southern extremity of the vast oval peninsula of Mesopotamia, the Jezireh or "Island" of the Arabs, the Aram Neheraïn of the Chaldeans and Egyptians in the Tutmes and Ramses epochs.

Fig. 78.—Confluence of the Euphrates and Tigris.
Scale 1 : 230,000.



6 Miles.

This insular region begins properly speaking at the Telek bend, where the Euphrates rapids are separated only by a narrow rocky barrier from the sources of the Tigris. But from the geographical, climatic, social, and historical standpoints, the true Mesopotamia is simply the plain in which are intermingled the irrigation canals derived from both rivers. Northwards this fertile tract is limited by a rampart running from the Tigris near the Samara bend, south-west towards the western extremity of the Saklaviyah Canal. This "rampart of Nemrod," as it is called, had a mean height of from 36 to 50 feet, and was flanked by towers at intervals of 160 feet; but in many places nothing remains of these works except shapeless heaps of rubbish.

The Euphrates is little used for navigation, although since 1836 steamers have plied on its waters below Birejik. At various epochs since the time of Alexander it was utilised by the Greeks, and as many as 1,100 vessels were collected on this great highway of Western Asia. In peaceful times the middle Euphrates is accessible for eight months in the year to boats 40 feet long, drawing 3 feet, and carrying cargoes of fifteen tons. Since 1563, when the Venetian trader, Cesare Federigo, sailed from Birejik down to Feluja, riverain port of Bagdad, European travellers have frequently followed this route from the Mediterranean to the cities of Mesopotamia. Before the introduction of steam the chief obstacle was the

Fig. 79.—Boats on the Euphrates.

difficulty of stemming the current. Hence most of the boats, after the downward trip, were taken to pieces and sold for timber or fuel, the boatmen returning by land, as in the time of Herodotus. The scarcity of wood on the Armenian and Tauric uplands contributes to render this traffic very expensive, and on the Lower Euphrates, below Hit and its asphalt springs, wickerwork craft are used, made of tamarind twigs stuffed with straw and covered on both sides with a coating of asphalt, which is found to be perfectly waterproof. Hundreds of such boats may at times be seen spinning round with the stream, and laden with cargoes for the caravans awaiting them along the banks. But since the expeditions of Chesney and other British officers, the Euphrates has been sufficiently surveyed to organise

a regular service of steamers throughout its lower course during the rainy season. But the towns that have succeeded Babylon and the other great cities of antiquity are not large enough to encourage such undertakings. From time to time a Turkish vessel ascends above Hillah, as far as Anah. But the small importance of the river as a navigable highway may be judged from the fact that nearly the whole trade of Anah with Bagdad is carried on, not by water, but by the land route running across the desert eastwards to Tekrit, on the Tigris.

There is authentic record of the prodigious fertility of the Babylonian soil, when the fluvial stream was skilfully distributed over the riverain plains. Herodotus, who had visited the Nile delta, declined to describe the vegetation on the banks of the Euphrates, lest his account might be suspected of exaggeration. Even after the devastation caused by so many invasions, and especially by the destruction of the Assyrian works of canalisation, the harried southern section of Mesopotamia, so different from the arid northern steppes, continued to retain its exuberant fertility. It yielded a vast revenue to the first caliphs without the oppressive taxation which afterwards depopulated the land and caused the desert to encroach on the arable tracts. From a statistical report, made by order of Omar, it appears that certain districts, known as the Sawad, or "Black Lands," not more than 2,750,000 acres in extent, furnished a yearly income of no less than £3,400,000 to the public treasury. Although greatly reduced, the yield is even now so considerable that one asks in amazement how so much can be drawn from the land under the present rudimentary system of cultivation. The Arab peasant selects his plot—some "khor," or marshy strip, with little but mud and reeds in the centre. Here he sows his barley, without clearing the ground or any preliminary, except, perhaps, scratching the surface with a hooked stick. Then the cattle are let loose to graze on the first sprouts of corn, after which nothing is done till harvest-time. Four months after the April sowing the crop is ready for the sickle, each grain yielding several hundredfold.*

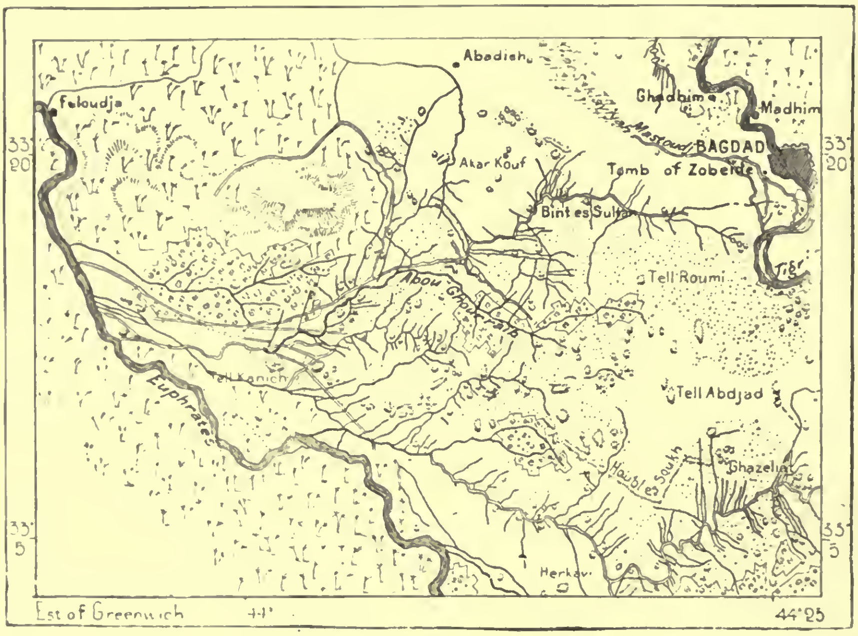
So much water is still drawn off by the somewhat primitive methods of irrigation, that the river becomes considerably reduced in certain parts of its course. Most of the peasantry water their fields by means of a contrivance which alternately raises and lowers an inflated goatskin. In more flourishing districts wheels are employed to raise the water to the stone aqueducts built on the summit of the cliff. Elsewhere the water is drawn directly from the river by means of channels regulated at the issue by a system of sluices. Such is all that survives of the colossal hydraulic works described by Herodotus, when the lateral reservoir supplying the network of rills was vast enough to receive for several days the whole stream of the Euphrates without overflowing. The canal, attributed to Nebuchodonosor, which ramified parallel with the river from Hit to the sea, was no less than 480 miles long; it has never been surpassed by any similar work, even in modern times.

The old canals, whose remains are still visible along the riverain tracts, were of two kinds. Some, such as the Nahr-el-Melek or "Royal Stream," which ran

* Baillie Fraser, "Travels in Mesopotamia."

transversely with the Euphrates to the Tigris at Seleucia, were excavated to a sufficient depth to allow the current to flow at all seasons and scour its bed by erosive action. These were navigable. Others, used exclusively for irrigation purposes, were flushed only during the floods, that is, precisely at the time when vegetation was most vigorous. But these rills were continually silting, and the mud dredged annually from their beds and deposited along both sides, gradually formed embankments rising from 20 to 24 feet above the surrounding plains. Some are still to be seen exceeding 33 feet in height. Eventually the labour of maintaining such works became excessive, and fresh canals were dug, thus gradually covering the plain with a succession of lofty dykes. In many places the horizon is bounded by five or six of these parallel walls, which at a distance look like the lines of

Fig. 80.—Canals of Mesopotamia West of Bagdad.
Scale 1 : 500,000.



12 Miles.

entrenched camps. Nothing would be easier than to restore these old canals by clearing out the sand and mud now obstructing them. Some partial repairs have already been effected, as in the Saklaviyah canal, which was navigated in July, 1838, by a steamer down to the Tigris at Bagdad. Since then some other Babylonian canals have been restored. But the modern irrigating rills mostly lack the magnificent proportions of the older works, which ranged from 60 to 250 feet wide; nor are they provided with any of those paved or cemented reservoirs, a few of which are still to be seen here and there in the interior of the land. The Arab and other riverain populations still, however, understand the art of constructing the fluvial embankments, using tamarind branches and reeds to make their fascines, which being elastic, offer greater resistance than stone. The mud lodging in the interstices also contributes to their solidity.

The Shat-el-Arab and Euphrates Delta.

A few miles below the confluence, the Shat-el-Arab is joined on its left bank by a considerable tributary, the Kerkha, flowing from the Luristan highlands mainly through Persian territory. About 500 or 600 yards wide, with a depth of from 20 to 35 feet, the Shat-el-Arab ranks among the great rivers of Asia, although it cannot be compared with such mighty streams as the Yangtze, Ganges, or Brahmaputra. It is even far inferior to the Danube, which, while rivalling the Euphrates in length, flows through a more humid region. Barnes estimates the mean discharge of the Shat-el-Arab at about 234,000 cubic feet per second. As the Persian Gulf has an average depth of some 250 feet, it would take the Shat about

Fig. 81.—Mouths of the Shat-el-Arab.

Scale 1 : 2,700,000.

seventy years to fill this cavity, were it to be dried up by any natural convulsion. The argillaceous particles held in suspense are deposited at the mouth of the river, where they have developed a crescent-shaped bar with scarcely more than 15 feet at low-water. Large steamers are thus obliged to wait for the tide, which usually rises about 10 feet, or else force the bar by steam pressure. The alluvia, which are continually encroaching on the gulf, during the sixty years from 1793 to 1853 advanced, according to Rawlinson, some 3,500 yards, or at the annual rate of about 60 yards. The whole delta appears to have thus pushed seawards about 90 miles altogether during the last 3,000 years. The plains of marine formation stretch, on the other hand, northwards to the vicinity of Babylon, where their origin is revealed by myriads of fossil shells belonging to the same species as those now living in the Persian Gulf. But while gradually gaining on the oceanic domain,

the river itself is continually shifting its course to the right and to the left, thus displacing its bed from year to year and from age to age. There was a time when the Tigris, the Euphrates, the Karun, and even the Kerkha, reached the sea in independent channels. The twin rivers, united in their middle course, flowed lower down in separate but parallel streams to the coast. The cuneiform inscriptions mention an expedition undertaken by Sennacherib against the country of Elam, in which he had to face the dangers of the sea in order to pass from the mouth of one to that of the other river. The old independent channel of the Euphrates, the Pallacopas of the Greeks, now known as the Jahri-zadeh, lies some 12 miles west of the Shat-el-Arab. Although frequently called the "Waterless River," it is, nevertheless, still flushed by a branch of the Euphrates for eight months in the year.* But the "Abdallah mouth," or embouchure of the Pallacopas, has been gradually obliterated by the marine current which skirts the Persian Gulf, flowing east and west from the Persian to the Arabian coast. The present estuary is also subject to displacements, and since the construction of the first charts of the British Admiralty, it has shifted eastwards, thus approaching the old mouth of the Karun. This Persian river, which formerly found its way independently to the sea, is now connected with the Shat-el-Arab by the Haffar, an artificial canal excavated 24 miles below Bassorah. The original channel of the Karun still exists under the name of Bamishir, and offers to the Persians a separate commercial route, of which, however, they make no use, in order not to have the trouble of cleansing and keeping open the passage.

The Shat and Bamishir mouths, the now forsaken channels, the upper watercourses, the intermittently flooded depressions, and the shallow, muddy shores, form altogether a sort of debatable region between the land and sea, which may be compared with the Gangetic Sanderbans. But the impenetrable thickets of tangled stems and branches characteristic of the Indian delta are here represented only by patches of reeds strewn over the flooded plain. Even these disappear at high-water, when travellers, after crossing the bar and ascending the Shat, might still fancy themselves on the high seas. Nothing is now visible except the feathery crests of the palm groves showing in mid-air like flocks of birds on the northern horizon. The saline spaces rising above high-water mark are clothed with alkaline plants, while the tracts exposed to periodical fresh-water floodings bear the *mariscus elatus*, whose fibrous roots become so closely matted together that the whole surface is completely protected from further erosions. The shallow muddy waters skirting the reedy zone harbour myriads of gurnards, which, by burrowing in the mud, gradually raise the soil, and thus promote the encroachments of vegetation.

The fauna of the Shat-el-Arab is partly marine. Sharks ascend with the tide as far as Bassorah, and even higher up, both in the Tigris and Euphrates. They also penetrate into the Karun, whose waters, flowing from the Khuzistan highlands, are much fresher than those of the Mesopotamian rivers. Within a few hundred yards the temperature differs by some 14 degrees Fahr. These sharks have been met as high up as the dam at Ahwaz, and even in the vicinity of Shuster.

* Carl Ritter, "Asien," vol. xi.

Climate, Fauna, and Flora of Mesopotamia.

Along the banks of both rivers, and in the steppes as far as the Sinjar and Mardin Hills, the summer heats are almost unbearable. In winter the cold is also acutely felt, especially in the open plains, where the stagnant waters freeze at night. When the keen north wind sweeps down from the uplands, the Arab horsemen fall prostrate on the ground, and the camels, numbed with cold, are unable to continue their march. The Mesopotamian region, which is indebted exclusively to its two rivers for its remarkable geographical individuality, thus forms climatically a zone of transition, in which the meteorological phenomena of the surrounding lands become intermingled, and in which are met the faunas and floras of diverse regions. While the northern districts are occupied by the advanced spurs of the Kurdistan highlands and by the first buttresses of the Iranian plateau, the vast interfluvial tracts form argillaceous or rocky steppes, where the vegetation fringing the right bank of the Euphrates is hemmed in by the sands of the desert, or by the saline efflorescences of dried-up morasses. On the one hand, the mountain slopes are carpeted in spring with flowers of every hue, and here the gazelle finds a shelter in the tall grasses. On the other, the arid soil yields little but a stunted growth of scrub, infested by wild beasts prowling nightly round the Bedouin's tent. Between Bagdad and Mardin no trees are to be seen, except in the cultivated depressions or on the summit of the hills. Nevertheless even the northern steppes contain some extremely fertile tracts, where millions of human beings might be supported by utilising the waters of the torrents and of the great rivers, In spring, hounds pursuing the game across the steppe return yellow with the pollen of the prairie flowers. The vast plain, green from February to May, yellow for the rest of the year, is connected by its mugworts with the Russian zone, by its mimosas with the Sahara, by its grasses with the Mediterranean basin. Most botanists have confirmed the statement made two thousand three hundred years ago by Berosus, that Mesopotamia is pre-eminently the land of cereals. Here was probably kneaded the first loaf; and in 1807 Olivier here discovered wheat, barley, and spelt, growing spontaneously in ground unsuitable for cultivation. Since then the same species have been found by several botanists in the region of the middle Euphrates.

As we proceed northwards and eastwards, we traverse in Mesopotamia a succession of distinct zones, separated from each other by irregular lines. The palm reaches northwards no farther than the southern foot of the Sinjar hills. On the Euphrates the last great palm-grove is that of Anah; at Tekrit on the Tigris are to be seen the two last date-trees, pioneers of the lower Mesopotamian forests. They mark the natural limit of the Arab domain, which is succeeded farther north by the olive of Kurdistan and Armenia. Cotton grows on the plain of Diarbekir, but nowhere beyond that point. Higher up the villages are surrounded by fruit-trees, such as the apple, pear, and apricot, common to Europe, although indigenous in Western Asia. But the cherry, so characteristic of North Armenia and the Euxine seaboard, is nowhere to be seen.

Down to the middle of the present century, the lion still roamed as far as the

neighbourhood of the Mardin Hills; but he has disappeared from the banks of the middle Tigris above the Kerkha marshes. The elephant and wild-ox, hunted by the Assyrian monarchs round about Niniveh, have here been extinct for at least two thousand five hundred years. The wild-ass has also vanished, and the pelican, till recently so common along the Euphrates, also threatens soon to disappear. In the steppe the most common animal is the jerboa, whose burrowings render the ground in certain places very dangerous for horses. The Euphrates has preserved a few remnants of a fauna distinct from that of the steppe. The great river has its own vegetation, its birds and wild beasts. Here are met the partridge, the francolin, the magpie, duck, goose, and other fowls, which are never seen straying far from the banks of the stream. The *ibis comata*, an Abysinian bird, builds on the Birejik heights, but apparently nowhere else in the Euphrates Valley. He is protected by the inhabitants of Birejik, who regard him as the patron of their city. The beaver has held his ground along the middle Euphrates, and the riverain marshes are inhabited by the *trionix euphratica*, a peculiar species of tortoise about three feet long. Chesney's statement, that crocodiles infest the stream where it approaches nearest to Syria, has been questioned by some zoologists.

Inhabitants of Mesopotamia—The Arabs and Kurds.

At all times, from the very beginning of recorded history, the population of Mesopotamia has been of a mixed character. The Iranians of the northern and eastern uplands, the Semites of the south and west, have met on the plains of the Tigris and Euphrates, where new peoples have been developed, differing from the original stocks, and distinguished, like the alloys of two or more metals, by special qualities. Assyrians and Chaldeans had their peculiar genius, contrasting with those of their Persian, Medic, Arab, Syrian, and Jewish neighbours, who have outlived them. Losing their political supremacy, they were either exterminated, or else absorbed in the victorious races, forfeiting name, speech, and the very consciousness of their nationality. Nevertheless, there still survives amongst the Kurds a tribe bearing the name of Aissor, which claims direct descent from the Assyrians. Over the ruins of the Babylonian and Ninivite cultures the primitive elements were enabled to resume the ascendant, and at present Mesopotamia is parcelled out like a conquered land between the ethnical domains of the lowland Arabs and highland Kurds and Turkomans. In the middle of the seventeenth century, when the Turkish empire was engaged in warfare with Austria, the Shammar or Shomer Arabs of Nejd, taking advantage of the absence of the Turkish garrisons, seized some of the towns along the banks of the Euphrates, and overran the plains as far as the Mardin Hills. The Anazeh, another Arab tribe, followed in their wake, eager to share the spoils of conquest, and after a protracted and sanguinary struggle, the whole region stretching from the Syrian highlands to the Iranian escarpments became divided between the two great tribes and their allies. The Anazeh remained supreme in the north-western steppes as far as the gates of Aleppo; the Shammars prevailed in the rest of Mesopotamia.

War, in the strict sense of the term, has ceased between the two rivals, but peace has never been concluded, and incursions are still frequent into the respective territories.*

Since the Crimean war the Turks have retaken the riverain cities; military stations have been established along the caravan routes, and some tribes have even abandoned the nomad life and become settled agriculturists. Thus the powerful Montefiks, that is, "United," formerly numbering at least thirty thousand tents, now consist of fellahin dwelling in houses on the lower Euphrates and Tigris. The Beni-Laam, comprising four thousand families, the Battars, Zigrits, Abu-Mohammeds, Shabs of the lower Karun, the last-mentioned largely mixed with Iranian elements, also form agricultural Arab communities in the neighbourhood of the large towns. But the change has been effected not so much by force as through the growing spirit of trade. The attempts made by the Turkish Government to compel them by force of arms to adopt a sedentary life have always failed. Those pass most readily from the nomad to the settled state who are engaged in buffalo and sheep-farming, while horsemen accustomed to the use of the lance can rarely be induced to leave the desert. Certain tribes have taken to living under reed huts in the midst of the marshes. Such are the Khozails and Madans, whom no conquerors have ever dared to pursue into their swampy domain. Other Arab clans, such as the Zobeirs, are engaged exclusively as boatmen on the lower Euphrates and Tigris. Mesopotamia boasts of no finer men than these robust watermen, none of whom can aspire to the honour of matrimony until they have made the trip at least three times from the Shat-el-Arab to the Tigris at Bagdad.

The Kurds of the advanced spurs belong, like those of Persia and Armenia, probably to different races, although now assimilated in habits and pursuits. The majority are Mohammedans, but the Nestorians are also numerously represented, especially in the valley of the Great Zab, round about Julamerk. The Chaldeans have wealthier communities in the Mossul district than on the Urmiah plateau; the Suriyam, or Jacobite Christians, number about thirty thousand in the Tur-Abdin Mountains at Midat and the convent of Der Amer. The ruins of seventy large monasteries attest the important position formerly held by this sect. In Upper Mesopotamia the Shemsieh, Yezidi, or "Devil Worshippers," have also found a refuge in the Sinjar Hills, where they long enjoyed almost complete autonomy. Other peculiar sects, remnants of the persecuted Gnostics, have also maintained themselves in the remote mountain retreats of Upper Mesopotamia. Mention is made of a highland community in the Mardin district supposed to be descended from the sun worshippers driven out of Harran, the city of Abraham. Threatened with death by the Caliph Al-Mamun, because they had no "book" like the Jews and Christians, they were compelled to conform officially to one of the tolerated religions. Most of them thus became attached outwardly to the Christian Jacobites, who occupied with them some sixty villages in the Mardin and Tor

* Anazeh and allied tribes :	30,000 tents,	or	120,000 souls.
Shammars „	28,300	„	112,000 „

—Anne Blunt, "The Bedouins of the Euphrates."

Mountains. With a characteristically Oriental power of simulation, they regularly perform the ceremonies prescribed by the patriarch; but they still secretly invoke the sun, the moon, all the host of stars, and regulate their lives according to the conjunctions of the planets and magic incantations.

The Sabians—Mohammedan Sects.

On the Euphrates and in the Karun Valley there are other Gnostic Christians, who are also said to have preserved some practices associated with star-worship. These are the Haraniks, or Sabians (not Sabæans), so named from one of their prophets, who call themselves Mandayeh, or "Disciples of the Word," and who are by the Catholic missionaries usually spoken of as "Christians of St. John the Baptist," whom they claim as the founder of their religion. The Sabians appear to have been formerly very numerous, forming in the Bassora district alone as many as thirty-six groups, some of whom comprised two thousand families. But in 1875 there were only about one thousand on the banks of the Tigris, and eight thousand in the whole of Mesopotamia. On the Euphrates their chief village is Suk-esh-Shiok in the Montefik territory. Before the middle of the present century all the Sabian priests in the Bassora district had been carried off by the plague, and their successors practised the outward rites alone, amongst which the most important is the frequent baptism of the faithful, a preliminary condition of the remission of sins. The Sabians are not permitted to dwell far from a "Jordan," or river, most of their ceremonies, including marriage itself, being celebrated in the running waters. They worship the cross, because the world being divided into four quarters, is itself the cross in a pre-eminent sense. Their religion, hostile sister of Judaism, Christianity, and Islam, is based on the Gnostic idea of the two principles formerly preached by their theologians and philosophers, at a time when the Sabians also had their period of literary activity. Like the Christians, Jews, and Mussulmans, they have their "Treasure" or Bible, called also the "Book of Adam," although posterior to Mohammed, and composed in a distinct Semitic dialect. This language, however, has no currency beyond the sacred writings, the Sabians now speaking Arabic, like the other inhabitants of the country. Polygamy is not prohibited, but they can marry only within the community itself. In civil life they are distinguished from the Mohammedans only by their greater honesty, the practice of which is indispensable for all compelled to earn the respect, in order to secure the tolerance, of their neighbours.

Like Christianity, Mohammedanism has given birth to a great number of sects in this region, where so many religious traditions have become intermingled. All the Eastern sects have their representatives in Mesopotamia. Here the Wahabis of Arabia have their jealously guarded communities; here the Babi of Persia hold their secret conventicles; here thousands of Mussulmans call themselves the disciples of the Akhund, the humble and poor priest of the Swat Valley in Afghanistan. Amongst the Montefiks and other Arabs of the lower Euphrates and Shat-el-Arab, there are also said to exist some adherents of the religious brotherhood of

the Senûsîya, which had its origin in Algeria, where it caused serious embarrassment to the French. Besides the persecuted sects, which are obliged publicly to simulate some tolerated religion, while practising their own in secret, there are villages in which two worships are held in honour. The inhabitants of Mossul, Moslem and Christian alike, have the same patron saint, Jerjis, or George. In many Mesopotamian districts, and notably at Orfa, the Mussulman women bring their

Fig. 82.—Diarbekir—Bridge over the Tigris.

offerings to "Our Lady" in order to obtain children. If their prayers are heard, they never fail to resort to the church to return thanks, scrupulously following the Christian practice on these occasions. On the other hand, there are many Bedouins who would have some difficulty in stating to what religion they really belong. They fear the evil eye, and conjure it by gestures, like the Neapolitans, but they recognise no form of prayer, and are Mohammedans only in name.

In the towns, the Arab population, intermingled with Turkish and Chaldean

elements, professes the Sunnite dogma. Nevertheless Babylonia contains, next to Mecca, the most venerated shrines of the Shiahs. Such are Kerbela, with the tomb of Hussein, and Nejef, where stands the domed mosque of Ali. Faithful Shiahs, fortunate enough to live and die in these holy places, have naught to fear in the after life, and will be held unanswerable even for the evil deeds committed here below. Hence thousands of Persians and hundreds of wealthy Hindus have settled either in Bagdad or in Ghadim, near the sacred tombs, and even in Nejef and Kerbela. Very numerous also are the rich Iranians who, not having the happiness to live in the venerated places, seek after death to have their remains here deposited. The transport of the bodies to Kerbela and Nejef, although at times prohibited, has remained one of the chief sources of traffic between Persia and Asiatic Turkey. According to a recent statistical report, the number yearly conveyed across the frontier averages about 4,000. But in 1874, after the famine and great ensuing mortality, as many as 12,202 were registered. Several Arab tribes, carried away by the force of example, have also acquired the habit of consigning their dead to the holy Shiah cities, which have been gradually transformed to vast cemeteries. Owing to the decomposed state of the bodies brought from a distance, and to the absence of proper sanitary measures, Irak-Arabi has become a chief focus of the plague in Asia. Of the forty last epidemics, as many as twenty-two either had their origin here or were disseminated through this region.

Topography of the Tigris Basin.

In the upper basin of the Western Tigris, the highest place above sea level is the mining city of *Khapur* (*Maden-Khapur*), standing at an altitude of 3,450 feet, and 830 above the torrent. The neighbouring Mount Magharat yields an abundance of copper ore, which is partly smelted on the spot, but mostly exported to the industrial cities of Asiatic Turkey, such as Diarbekir, Erzerum, and Trebizond. Till recently, most of the copper utensils used throughout the East, from Constantinople to Ispahan, came from the workshops of Maden-Khapur. At the beginning of the present century, about four hundred tons of ores were annually sent down from the Upper Tigris to Bagdad; but since then the yield of copper has greatly fallen off. The argentiferous lead mines are little worked, and those of the precious metals are entirely neglected. A bluff overlooking the torrent south-west of Khapur is crowned by the town of *Arghana*, which from the neighbouring mines also takes the name of Maden—*Arghana-Maden*, or "Arghana of the Mines."

Diarbekir or *Diarbekr*, that is, the "Bekr country," so-named from the Arab clan, Bekr, which conquered it in the seventh century, is the ancient *Amid* (*Amida*), and is still often called Kara-Amid, or "Black Amid," from the colour of the basalt used in its construction. Standing at an altitude of 2,000 feet above sea level, with a climate like that of South France, Diarbekir occupies a peculiarly happy position at the northern extremity of Mesopotamia, at the converging point of the chief routes between the Euphrates and Tigris basins, as well as of the

Turkish, Armenian, Kurd, and Arab ethnical domains. It has the further advantage of commanding a vast alluvial plain of great fertility, a plain which has at all times been the "granary" of Western Asia. Hence the great importance enjoyed by Diarbekir in former times, when its inhabitants were counted by hundreds of thousands. During many a protracted siege, more victims fell beneath its walls than there are now residents in the whole place. The old basalt ramparts, flanked with round towers still in good repair, have a circuit of 5 miles, sweeping round from a quadrangular citadel in ruins to a ten-arched bridge, the last structure of the kind now crossing the Tigris. Within the walls the city is gloomy, dull, damp, and unhealthy, with narrow, muddy streets, the widest of which scarcely exceeds 12 feet. This thoroughfare runs through the bazaar, which is well stocked with European and local wares, the latter including copper utensils, filigree jewellery, woollen, silk, and cotton fabrics. The bazaar is always crowded with a motley gathering of Kurds, Armenians, Turks and Turkomans, Chaldeans, Nestorians, Jacobites, Yezidis, Jews, Syrians, and Greeks, besides many Bulgarians recently banished to this place by the Turkish Government. Nearly half of the inhabitants are Christians, whose churches rival the Mohammedan mosques in number and size.

The valleys of the Upper Tigris and its affluents abound in ruins, and the modern towns themselves stand mostly on the site of ancient cities. Of the older structures, the finest remains are those of a bridge, whose broken arches rise 80 feet above the main stream, near its junction with the Batman-su. North-east of Diarbekir, and on a tributary of the Batman, lies *Maya-Farkein* (*Farkein*), the *Martyropolis* of the Byzantines, where are still to be seen the imposing ruins of the monument raised in the fifth century over the remains of several thousand Christians massacred by Sapor, King of Persia. Farther east, the Batman is crossed by a Persian bridge with pointed arches 165 feet high. The picturesque town of *Huzu* (*Khuzu*, *Khazu*), stands on the ruins of an ancient castle near an Armenian church yearly visited by numerous pilgrims from Syria, Armenia, and Russia. *Sert*, or *Saërt*, also stands on ruins supposed by d'Anville and others to be those of Tigranocerta. The polished surface of the rocks in several places in this district bear Armenian inscriptions in the cuneiform character.

But next to Diarbekir, the largest town in the Upper Tigris basin is *Bitlis*, which occupies a delightful position 8,000 feet above the sea near the south-west corner of Lake Van. Near it is an ancient fortress commanding the junction of the main stream with the Bitlis-su, a mountain torrent formed by the mineral, thermal, and other rivulets flowing from the Nimrud-dagh. Bitlis, which is partly inhabited by Armenians, has some weaving and dyeing industries, and enjoys a considerable trade as the chief station between the Upper Murad and Tigris valleys.

The ancient city of *Jezireh-ibn-Omer*, or "Island of Omar's Son," lying below the Tigris gorge on an island formed by the river and an artificial canal, despite its Mussulman name, was often the centre of non-Mohammedan communities. In the fourteenth century it contained a large Jewish colony, whose schools produced

some famous rabbis. About the beginning of the present century the Yezidis had made it one of their chief strongholds, but when the place was stormed by the Turks nearly all of them were put to the sword, and Jezireh has since been occupied by the Kurds. In the neighbourhood grows a shrub resembling the cytisus, which is sometimes covered by thousands of cocoons belonging to a wild species of silkworm. From these cocoons the women of the district manufacture a very durable silken fabric. Lower down is the decayed city of *Eski-Mossul*, or "Old Mossul," occupying a chalk terrace on the right bank of the Tigris.

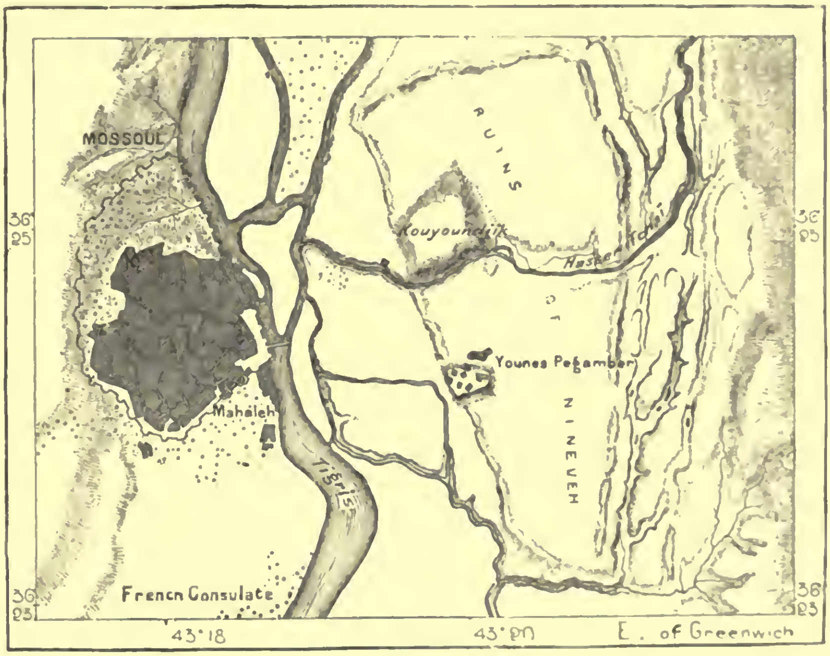
Mossul itself is a relatively modern place, for it is first mentioned in Mohammedan times. But it stands on the ground which must have been formerly occupied by the western suburb of Niniveh, on the right bank of the river. Like Birejik on the Euphrates, it lies on the natural highway leading from the Mediterranean along the southern foot of the Kurdistan hills eastwards to the "royal route" through Zagros to the Iranian plateau. Even caravans from Aleppo to Bagdad pass through Mossul, in order to avoid the territory occupied by the marauding Anazeh tribes. According to an old writer quoted by de Guignes, "Damascus is the gate of the West, Nishapur the gate of the East, and Mossul the high road from East to West." Although much decayed, like the other cities of the Tigris, Mossul still presents a fine appearance, its houses developing a vast amphitheatre within an enclosure 6 miles in circuit, on the slope of the Jebel-Jubilah, an eastern spur of the Sinjar range. The summit of the hill is occupied by the dwellings and gardens of the better classes, while lower down those of the artisans and poor are crowded round the bazaars, baths, and mosques. Beyond the walls, the city stretches southwards through the suburb of *Mahaleh*, in front of which the Kurds stop and take their rafts to pieces. The public buildings, mostly in bad taste, are noted chiefly for the beauty of their materials, amongst others the so-called "marble of Mossul," an alabaster brought from the quarries of *Meklub-dagh*, on the east side of the plain. Instead of exporting its delicate muslins to the whole world, as in the time of the caliphs, Mossul now imports nearly all its woven goods, the local industries being mainly restricted to tanning and filigree work. But some trade is done in gall-nuts, cereals, and other produce from Kurdistan.

At its narrowest point, some 560 feet broad, the Tigris is crossed by a bridge of boats, which is continued across the plain subject to floodings by an embankment winding amidst the fluvial channels. About a mile and a quarter from Mossul, the east side of the river is skirted by an extensive level terrace limited on all sides by ravines now choked with refuse. On this plateau stood *Niniveh*. By the Hasser-chai, a small affluent of the Tigris, it is divided into two halves, each with a circuit of over 5 miles. A square mound 60 feet high, pierced in all directions by galleries, stands in the northern section immediately above the Hasser-chai. This is the far-famed Kuyunjik hill, a huge mass of bricks estimated at fourteen and a half million tons weight. The southern quarter is commanded towards the middle of its western scarp by the Yunes-Pegamber, or Nebi-Yunas, another mound so named in memory of the prophet Jonah, whom Mohammedans

and Christians alike believe to be buried there. A third less extensive heap of detritus marks the south-west angle of the terrace. But the whole place, exclusive of the suburbs, which probably stretched beyond the enclosures along the river and highways, represents about one-eighth of the area of Paris. The multitudes spoken of in the Book of Jonah could scarcely have been packed together within such narrow limits.

It had long been known that under the mounds facing Mossul lay concealed many curious vestiges of the ancient Assyrian capital. Travellers had detected the remains of buildings and sculptures, and had brought away inscribed stones, cylinders, and other small objects. But the first explorations were made in 1843, under the direction of Botta, French consul at Mossul. Since then a new world of

Fig. 83.—Mossul and Niniveh.
Scale 1 : 77,000,000.



2,200 Yards.

art has here been brought to light, a new science has been created, unfolding the annals of Assyria, revealing the ceremonies and feasts of its people. But much still remains to be discovered. Even the Kuyunjik mound, examined especially by the English archæologists Layard, Loftus, and Smith, is far from being exhausted. The rough plans, however, have been determined of the two palaces here discovered, which have yielded the colossal blocks, weighing from thirty to forty tons, now in the British Museum, besides the still more valuable libraries composed entirely of brick tablets, each forming, as it were, the page of a book. The mound of Jonah, protected from profane hands by the Mussulman tombs and houses covering its slopes, remained untouched till 1879. Here Mr. Hormuzd Rassam has recently discovered the remains of the palace of Sennacherib.

But amidst all the débris of Assyrian cities, the most carefully studied ruins are those of *Khorsabad*, or *Khos-robat*, lying some 12 miles north-east of Mossul, far beyond the limits of Niniveh. Here was the "Versailles of some Assyrian Louis XIV." The city scarcely covered much more than an area of one square mile; but its enclosure is well preserved, and the palace, methodically explored by Botta and his successor, Place, is more thoroughly known in all its details than any other Mesopotamian edifice. It was built between the years 705 and 722 of the old era, under the reign of Sargon, whose bas-reliefs and inscriptions, covering a surface of more than a mile in extent, commemorate the hitherto forgotten glory and power of that monarch. Some idea of the prodigious labour represented by this "City of Sargon" (Hisr-Sargon, or Dur-Saryukin), from the fact that the outer walls were no less than 80 feet thick and 100 feet high. Near the palace stood the *Zigurat*, or storied tower, perhaps an observatory, resembling the royal tombs of Egypt in its pyramidal form. One of the most remarkable finds of Place was an iron magazine, containing over one hundred and sixty tons of all kinds of instruments.

East of Koyunjik are the mounds of *Karamlis*, and of the other Chaldean villages, the most famous of which, some 18 miles south of Mossul, bears the legendary name of Nimrud. It is now known that this hillock stands on the site of *Calash*, the first capital of Assyria, founded nearly thirty-two centuries ago by Salmanazar I. Later on it continued to be a large city, even after the royal residence had been removed to Niniveh. It occupied a convenient position near the confluence of the Tigris and Great Zab, and amongst its monuments conspicuous was the palace of Assur-Nazirpal, dating from the ninth century of the old era. The sculptures here collected are the masterpieces of Assyrian art, and the "black" obelisk is the most precious epigraphic monument of the empire. On the *Balawat* mound, 9 miles north-east of Calash, Rassam discovered the famous bronze gates now in the British Museum, which are covered with sculptures and inscriptions commemorating the great deeds performed by Assur-Nazirpal 2,750 years ago.

Many other mounds still harbour unknown treasures. All the cities of the plains had their temple and palace, and the valleys of the Khabur and Great Zab contain numerous remains of structures built by the Assyrian kings, who spent half their time in the upland wooded region pursuing the chase. Some of the most remarkable sculptures in Upper Mesopotamia are carved on a rock overlooking the Dulap rivulet near *Maltai*, 50 miles north of Mossul. Still more curious colossal figures were cut in relief on a limestone wall in the narrow Bavian Valley, separated by the Meklub hills from the plain of Mossul.

At present the Great Zab basin is one of the most dangerous regions in Asia, being held by the fiercest of all the highland Kurdish tribes, who have been least affected by the influence of the Turkish and Arab Mohammedans settled on the plains. Here were also situated the mountain fastnesses of the marauding Nestorian tribes, who so long defied the power of the pashas. No record occurs of any Assyrian, Persian, or Greek conquerors who ever dared to penetrate into this dreaded region. All skirted it either on the north or south, in order to reach the

Persian tableland, or descended into the plains of the Tigris. Schulz, the first European traveller who ventured into this district, in 1829, perished, with all his companions. The Kurdish chiefs, formerly independent but now subject to Turkey, thanks to their mutual jealousies, reside during a portion of the year in fortresses surrounded by a few houses. In winter, on the return of the tribes from their

Fig. 84.—Calash, and Confluence of Tigris and Great Zab.

Scale 1 : 445.000.

12 Miles.

mountain pastures, these places become veritable cities. The most important is *Julamerk*, capital of the Hakkari Kurds, crowning a bluff on the right bank of the Great Zab. A little farther north lies the village of *Koch Hannès*, residence of the Mar Shimen (" Master Simon "), patriarch of the Tiyari (Nestorians). The Hakkari chief works some of the iron and lead mines in the Julamerk district ; but

the great mineral wealth said by the missionaries to be contained in the surrounding hills is entirely neglected.

South of the Hakkari country, the town of *Amadiah*, lying on a slope near the Great Zab and Khabur water-parting, was long a chief emporium of the highland Kurds, who here assembled to effect their exchanges with the Mesopotamian dealers. A Jewish colony, comprising nearly half the population, recalls that period of com-

Fig. 85.—Hakkari Kurd Tribes, Great Zab Valley.

Scale 1 : 1,000,000.

18 Miles.

mercial activity. These Kurdistan Jews readily contract alliances with the Turks, and have thus become gradually assimilated to the surrounding populations, from whom they differ little in appearance and usages. South of Amadiah stands the little temple of *Sheikh Adi*, with its graven serpent, symbol of the fallen angel. Round about are disposed the altars which on the great feasts are lit up with fires of naphtha and bitumen. *El Kosh*, another religious centre, and residence of the

Chaldean patriarch, stands at the foot of a hill, which is honeycombed with grottoes, old dwellings, and tombs, and crowned with the monastery of *Rabban Ormuz.*

Revandoz (*Rowandiz*), lying between profound lateral gorges of the Great Zab above the issue of the ravine, is a large place, whose inhabitants are crowded together within its narrow ramparts. Here are closely packed over one thousand houses, each with two or three families and even more. During the summer months the whole population, men, women, children, dogs, and poultry, pass their time mostly on the flat roofs strewn with foliage. Revandoz is visited by the Mossul dealers, who here barter their European wares for gall-nuts and some other local produce.

The chief market of the Kurds occuping the basins of both Zabs is *Arbil* (*Erbil*), the *Arbela* of the Greeks, which lies at an elevation of 1,430 feet beyond the mountain region, on a pleasant undulating plain opening westwards to the Great Zab and Tigris, southwards to the Little Zab Valley. It stands exactly on the ethnological frontier between the Arab and Kurd domain, but is little more than a ruin, compared with its former greatness. The remains of the ancient enclosure may still be traced, and the old town occupies one of those artificial mounds, which are so numerous in this region. The explorations recently begun have already revealed vaults and galleries probably of Assyrian origin. Farther west extend the conglomerate Dehir-dagh Hills, pierced by ancient irrigation canals, which descend towards the Shemamlik plain between Erbil and the Great Zab. At *Gaugamela*, where this river escapes from its last gorge between the Dehir and Arka Hills, was fought the so-called battle of Arbela, which threw open the Persian highway to the Macedonians.

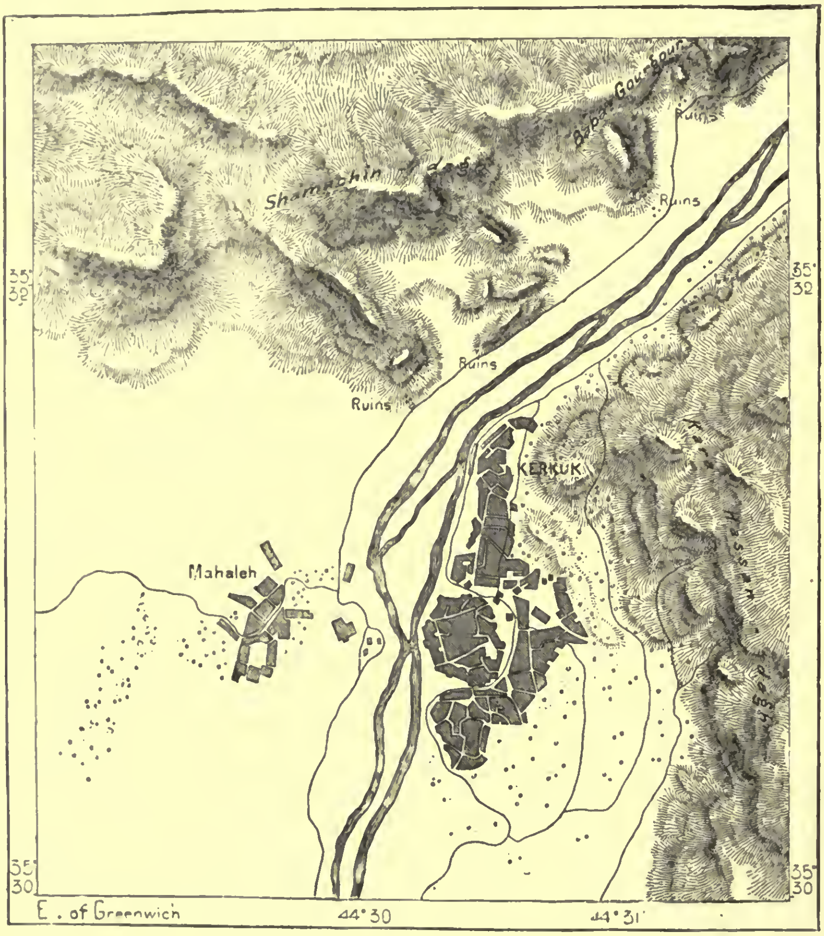
In the Little Zab basin the only town is Altin-Kiopru ("Bridge of Gold,") a small place commanding the caravan route between the Erbil plain and the valley of the Adhim or Diyalah. It occupies an extremely picturesque position on a conglomerate island, steep and rugged above, sloping gently down to a sandy point at its lower extremity. The river is here crossed by a lofty pointed bridge, from whose parapets a fine view is commanded of the town and surrounding country. A little farther to the south-west begins the Khaza-chai Valley, occupied by *Kerkuk*, the largest place in Lower Kurdistan. Kerkuk consists in reality of three distinct towns—the fortress crowning an artificial mound 130 feet high; the lower quarter, forming a semicircle round the foot of the citadel, and the *mahaleh*, or suburb, whose houses and gardens line the right bank of the stream. Here resides a dervish sheikh, spiritual head of fifty thousand *murids* ("disciples,") dispersed over various parts of Mesopotamia. Here are also some much-frequented thermal waters and copious saline springs, and rich alabaster quarries in the neighbouring hills. A little to the north lies a famous igneous district, like the Phlegrean Fields of Italy, where was worshipped the goddess Anahit. From its underground rumblings this land of fire has received the name of Baba Gurgur, or "Father Grumble." The naphtha of Kerkur is forwarded to Bagdad and every part of Mesopotamia. Supplies are also drawn from the bituminous

springs of *Tuz-Khurmapli*, farther south, and of *Kifri* or *Salahieh*, a small place on a tributary of the Diyalah.

Below the confluence of the Tigris and Great Zab, the main stream is lined with ruins, indicated from a distance by the *tells* or heaps of refuse, now clothed with grass and brushwood. Near one of these heaps, the highest in Mesopotamia above Bagdad, stands the village of *Kaleh-Sharghat* on the site of the ancient *Assur*, which preceded Ninivch, and gave its name to the Assyrian empire. In

Fig. 86.—Kerkuk.

Scale 1 : 45,000.



11 Yards.

the midst of the wilderness the Shammar nomads pitch their tents on the ruins of another ancient capital, whose very name of *El Hatr* or *Hatra*, seems to have meant "City" or "Residence," in a pre-eminent sense. On the banks of the Tartar, a streamlet flowing from the Sinjar valleys, stand the perfectly circular walls of a temple of the sun facing eastwards. This richly sculptured edifice dates from the period of the Sassanides; but it stands on far more ancient foundations, some fragments of which recall the Chaldean epoch.

TYPES AND COSTUMES—ARABS OF BAGDAD.

On the Tigris the scattered groups of modern dwellings are usually indicated from afar by the encircling belts of verdure. Between Mossul and Bagdad the only oasis containing a large population is that of *Tekrit*, which is situated below the *fattha* or cutting of the Hamriu. Here may be seen the black naphtha springs welling up from the bed of the river, and covering the yellow waters with their iridescent bubbles. The low houses of Tekrit are commanded by a vast ruined castle, birthplace of Saladin. Along the left bank of the Tigris follow in succession one of the many *Eski Bagdad* or "Old Bagdads," on the site of an unknown city, and *Samara*, now a small village, but in the ninth century capital of the empire of the caliphs. Near this spot are the remains of an earthen rampart known to the Arabs as "Nimrud's Wall," possibly a fragment of the "Medic Wall" which formerly guarded the plains of Lower Mesopotamia from the incursions of the northern barbarians.

Bagdad (*Baghdad*), which bears the official title of Dar-es-Salam or "Abode of Peace," stands on the site of an ancient city, whose name Oppert interprets by the Persian word *bagadata* or "God-given." But of this place nothing but ruins remained when Bagdad was rebuilt by Abu-Jaffar-al-Mansur, in the second half of the eight century. It lies in one of those regions where the converging historic routes necessarily give rise to large cities Here the Tigris approaches so near to the Euphrates as to form with it and the connecting canals a common hydrographic system. Here also the Tigris is itself joined by the Diyalah, which offers the best approach through the intervening border ranges to the Iranian tableland. But the very importance of Bagdad attracted the invaders, and few other cities have been more frequently levelled with the ground. Remains of galleries are still found below the surface, whose bricks are inscribed with the name of Nabuchodonosor. But the very vestiges have disappeared of the palace occupied by the renowned Harun-ar-Rashid, contemporary of Charlemagne. Of this flourishing epoch Bagdad preserves nothing but the rifled tomb of Zobeid, favourite wife of Harun.

The city founded by Ali-Mansur stood on the right bank; but it continued to grow beyond its too narrow enclosures, gradually overflowing to the other side through suburbs and gardens, which have since become the true city. The old quarter, now sunk to a mere suburb, has lost its very name, and is now called *Karshiaka*, and inhabited chiefly by Arabs of the Agheil tribe. At the narrowest point of the river both banks are connected by two bridges of boats, each some 730 feet long. Formerly Bagdad spread over the surrounding plains, where it formed an agglomeration of forty distinct groups, connected by lines of houses skirting the highways. At present it no longer fills the rectangular space enclosed by the ramparts, half of which is covered with ruins. Several quarters consist of wretched tumble-down hovels little better than those of the country villages. Nevertheless, taken as a whole Bagdad is one of the most prosperous cities in Turkey. As an emporium and station for the transit trade, it receives the produce and costly wares of the whole of Hither Asia, and the eight English and Turkish steamers now plying between Bassora and Bagdad no longer suffice for

the riverain traffic in corn, wool, and gall-nuts. To the export trade the local industries contribute largely; the dates, fruits, and vegetables of the surrounding gardens are famous throughout the East, and the native breeds of horses, and white asses speckled with henna, command the highest prices. Besides the Moslem colleges and the Catholic and Protestant missionary schools, Bagdad possesses a technical institution for the metal, textile, paper, chemical, and other industries. It even pays some attention to hygienic matters, and a fine "people's garden,"

Fig. 87.—Bagdad.
Scale 1 : 70,000.

2,200 Yards.

watered by steam hydraulic works, has been laid out on the left bank of the Tigris. Thanks to the improved sanitary arrangements, the plague, which carried off or dispersed three-fourths of the population in 1831, and again committed serious ravages in 1849 and 1877, is continuously diminishing in virulence. Bagdad is also better protected than formerly from inundations by means of a lofty dyke constructed round the town walls. But the "Bagdad date," another form of the "Aleppo button," attacks nearly all the native and foreign residents.

The Turks have remained strangers in Bagdad as well as elsewhere in Mesopotamia, where they are chiefly represented by the official and military classes. The city is essentially Arab, as much in speech and usages as in the patriotic feeling of the people. Yet the Jews form at least one-fourth of the urban population, being thus numerous enough to preserve the use of the Hebrew tongue, which they speak as well as Arabic. Most of the Iranians, including many of the Babi sect, are settled beyond the walls at *Ghadim*, *Khatimain*, or *Imam-Musa*, 3 miles north-west of the upper bridge over the Tigris. Above the houses of Ghadim rise the six minarets of the mosque containing the tomb of the Shiah martyr, Musa-ibn-Jaffar. Bagdad boasts of no monument comparable to this Shia sanctuary, which is approached by zealous pilgrims on all-fours, by fashionable worshippers in the comfortable carriages of the tramway. Over against Ghadim stands *Madhim*, another place of pilgrimage on the right bank, visited by the "orthodox" Sunnites.

The Ghadim horse-railway forms the first section of a system of lines destined some day to connect Bagdad with Kerbela, Nejef, and Hilleh southwards, and northwards with *Khanikin* or *Khanakin*, on the Persian frontier. From forty to fifty thousand Iranian pilgrims pass yearly through this place to the Shiah sanctuaries below Bagdad. Due north of Khanikin, in the fertile Diyalah basin, the modern city of *Suleimanieh*, dating only from 1788, occupies a strong strategical position in the heart of the mountains at the foot of the snowy Avroman, where it guards the Persian frontier and serves as a market for the surrounding Kurdish tribes. In the same Diyalah Valley the large village of *Bakuba* lies some 30 miles north of Bagdad near the ruins of *Dastagherd*, another "Eski Bagdad," which has not yet been explored.

The plain round about Bagdad is dotted over with numerous *tells*, one of which, the *Tell Mohammed*, stands at the very gates of the city. Another, 18 miles farther west, bearing the name of *Kasr-Nimrud*, or "Palace of Nimrod," is one of the highest in Chaldea, towering over 130 feet above the plain. Like the other mounds in this region, it consists of sun-dried bricks alternating with layers of reeds. Other barrows above Bagdad fringe the left bank of the river, like a long line of military outposts; and below the Diyalah confluence heaps of bricks and earthenware mark the sites of the *Madain* or "Two Cities," ancient capitals facing each other on either side of the Tigris. Of *Seleucia*, the city on the right bank, so-named in honour of the sovereign who built it after the destruction of Babylon, not a single monument survives, and the traces of its square enclosures are scarcely to be recognised. A portion of this old Syrian capital has been swept away by the erosions of the stream, while fresh land has been added on the left side to the peninsula where stood *Ctesiphon*, capital of the Parthians. Of the city itself little remains except bricks and potsherds; but the palace of Chosroes Nurshivan, dating from the sixth century of the new era, still lifts its colossal gateway over 100 feet above the plain. This Tak-i-Kesra (Tak-Kosru), or Arch of Chosroes, leads to a nave 160 feet long, grouped round which is a structure several stories high, laid out in apartments of small size. The ornaments and

sculptures have disappeared, but the majestic archway, the only pre-Mohammedan Persian monument in Lower Mesopotamia, is all the more imposing in its naked grandeur. Beneath this vault the Arab victors on the fatal field of Kaderia found the throne, crown, girdle, and standard of the Persian monarch.

Below Madaïn many other hillocks recall the existence of vanished cities, while the still inhabited villages gradually give place to nomad camping-grounds. On the route, some 480 miles long, traversed by the steamers between Bagdad and Bassorah, there are only four stations, one alone of which, *Kut-el-Amara*, founded in 1860, has become a market for hundreds of tribes. Here and there is seen some domed shrine, such as the "Tomb of Esau," and near the Euphrates junction that of Esdras, the latter equally venerated by Jew, Christian, and Moslem. The Shat-el-Hai canal, which branches from the Tigris at Kut-el-Amara, flowing thence southwards to the Euphrates, waters a cultivated and populous district, containing the remains of some of the oldest cities in Chaldea. Here lies *Tello*, or *Tell Loh*, the *Sirtella* (Sirbula) of archæologists, where the explorations of M. de Sarzec suddenly revealed a remarkable period of art antecedent to the Niniveh and Babylonian epochs. At that time writing had not yet acquired its cuneiform aspect, and each character still showed the vague outlines of the object represented under its hieroglyphic form. The monuments of Tello, sculptured in hard stone possibly brought from Egypt, there being none in the country, have been removed to the Louvre.

Topography of the Euphrates Basin.

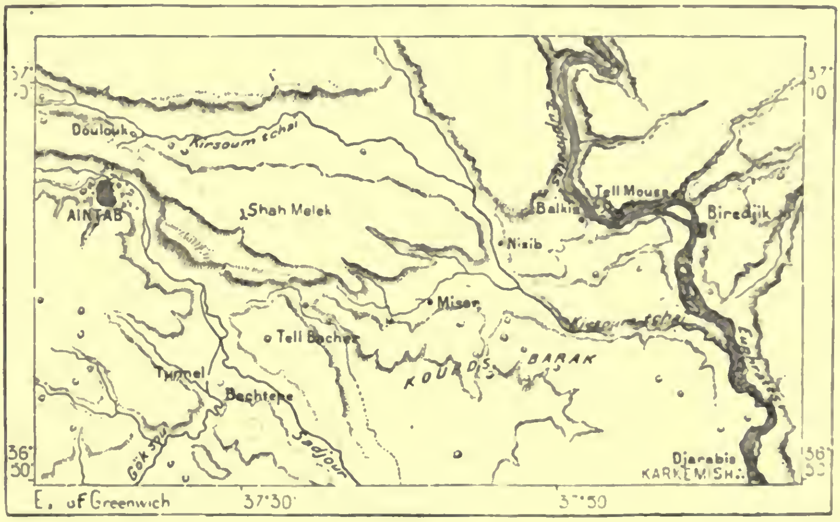
The Euphrates, a less copious stream than the Tigris, farther removed from the fertile upland valleys, and hemmed in on its right bank by the wilderness, has consequently far fewer cities above Babylonia proper. Although its course marks the great diagonal line between the Mediterranean and Persian Gulf, it is a lifeless artery compared with its eastern rival. But formerly it was not so. From the issue of the gorges down to Susiana, the Tigris was lined by all the great Assyrian cities. But in Lower Mesopotamia, south of the Medic wall, nearly all the towns stood either on the Euphrates or else in its vicinity. The contrast between the Assyrian and Babylonian empires thus corresponds to that of the two rivers themselves.

From the confluence of its two great headstreams down to the issue of the Tauric gorges, the Euphrates has nothing to show except a few insignificant hamlets. But in the lateral basin of the Tokma-su are situated the two capitals, *Malatia* and *Azbuzu*, between which nearly the whole urban population formerly migrated with the seasons. Malatia, the Melitene of the Romans, was resorted to in winter, but quitted in summer for the more elevated and breezy Azbuzu. At present this movement has mainly ceased, most of the inhabitants having definitely settled in Azbuzu, a delightful place, where every house has its fountain, garden, or grove. *Gurun* and *Derendah*, the two chief places in the Upper Tokma Valley, are also mostly abandoned in summer, when the population removes to the surrounding districts.

Samosata, former capital of Comagena and birthplace of Lucian, is now a ruined hamlet, less important than the small town of *Sucerek*, which lies in a lateral valley on the route to Diarbekir. In this neighbourhood have recently been discovered the sumptuous sepulchral monuments of the kings of Comagena, ornamented with colossal statues over 50 feet high. The natives regard this structure as the tomb of Nimrod, legendary hero of Mesopotamia, whence the name of Nimrud-dagh that they have given to the surrounding hills.

Below Samosata follow the Turkish town of *Behesni* and *Rum-Kaleh*, or "Castle of the Romans," former residence of the Armenian Catholicos. Here the Euphrates was at one time crossed by the great caravan route which has now been deflected southwards to *Bir* (*Bir-al-Dirat* or *Birejik*), where, according to the Greek legend Bacchus threw the first bridge over the river on his march to the

Fig. 88.—Aintab and Birejik.
Scale 1 : 720,000.



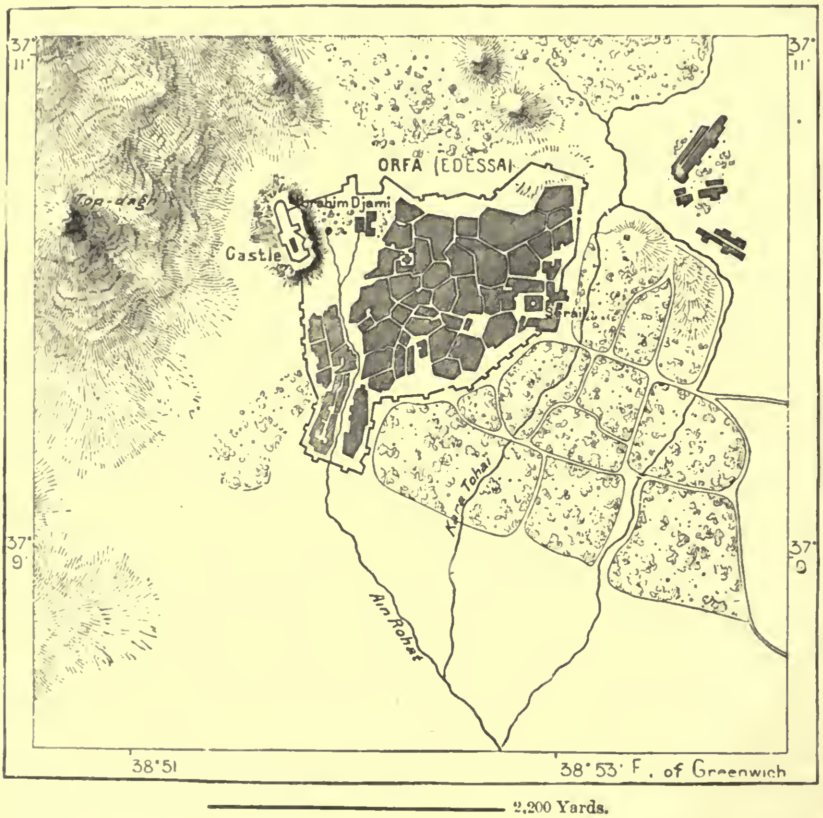
Artificial Mounds.
2 Miles.

conquest of India. An isolated bluff on the left bank is crowned with the picturesque ruins of a vast fortress, which formerly guarded the passage of the river at this point. Bir is inhabited chiefly by Turks, with an Armenian colony engaged in the transit trade, and near the citadel numerous Kurdish families, burrowing amidst the ruins and in the caves of the limestone rocks. In the district much barley is grown, and towards the west lies the mound of *Balkis*, where were found some fine Roman mosaics and paintings.

The main highway from Bir to Alexandretta traverses the small town of *Nizib* and its olive groves, where the Turkish defeat in 1839 placed Asia Minor at the mercy of the Egyptian army under Ibrahim-Pasha, and led to the European intervention. The chief place in this region is *Aintab*, which develops an amphitheatre along the northern slopes overlooking the Sajur Valley. Between

the town and river stands an artificial mound covered with the ruins of a now abandoned fortress. Aintab, which is inhabited chiefly by Turkomans, has few industries, but does a large transit trade, as the chief station between Birejik and the coast. Towards the south-west an artificial canal continued by a tunnel 830 feet long, runs from the Sajur to the headwaters of the Gok-su, flowing southwards to the plains of Aleppo. This cutting, which dates from the thirteenth century, and which has been recently restored, thus connects the Euphrates basin with the closed depression of which Aleppo occupies the lowest level. Roman ruins are numerous in this district, which for four hundred years formed the frontier of the empire.

Fig. 89.—Orfa.
Scale 1 : 50,000



On the right bank of the Euphrates, near the Sajur confluence, stand the remains of the temple of *Jarabis* (Jerablus), which till recently was supposed to have been that of the ancient Europus. But the explorations of Conder and Henderson have placed it beyond doubt that these are the ruins of *Karkhemish*, the long sought for capital of the mysterious Hittite nation. The sculptures, carved in the basalt and limestone rocks, while recalling those of Assyria, present some original features. The inscriptions appear to be in hieroglyphic characters, that have not yet been deciphered. South of the Sajur, common limit of the Arabic and Turkish languages, lies the ruined city of *Bambyce*, the present *Mambij*, which was

one of the numerous *Hierapolis* formerly consecrated to the sun and to the "Great Goddess." It bears also the name of *Magog*.

East of Birejik the first great caravan station on the route to Mossul, is *Orfa* (*Urfa*), the ancient *Rohas* and the *Edessa* of the crusaders. Standing on the west bank of the Kara-chai, which flows through the Nahr-Belik to the Euphrates, Orfa is flanked by the advanced spurs of the Top-dagh, and its castle, erected by Justinian, rises above a steep bluff completely isolated by moats cut 40 feet through the live rock. A triangular rampart strengthened with square towers separates the town from the wooded and fertile district watered by the Kara-chai. From the citadel, on the west, a view is afforded of the city, with its domes and minarets, and the vine-clad slopes of the surrounding hills. A spring, the ancient

Fig. 90.—Orfa—Mosque and Fountain of Abraham.

Callirhoe, still wells up at the foot of the castle, and overflows into a sacred tank, in which are mirrored the walls of a mosque consecrated to the patriarch Abraham, the Khalil, or "Friend of God." Two columns, traditionally attributed to the father of Israel, stand near the citadel, and the surrounding cliffs are pierced by at least two hundred caves, ancient tombs converted into modern dwellings. In the city are some mediæval remains, including fragments of the palace occupied by the princes of Courtenay, rulers of Edessa during the Crusades. The buildings of Orfa are constructed of alternate layers of limestone and basalt, producing a very pleasant effect. The industries are restricted mainly to weaving and earthenware, but there is a large transit trade, and considerable quantities of wheat are now exported. Hundreds of half-sedentary Bedouins and Kurds pitch

their tents in the neighbourhood, and are employed by the French Consul on the extensive plantations of Mejeri-Khan, which, besides cereals, yield sesame, hemp. and cotton.

All the cities of Upper Mesopotamia are associated with religious events. South of Orfa, sacred to the memory of Abraham, *Harran*, the ancient *Charræ*, is mentioned in Genesis as having been the residence of the same patriarch, and here star-worship long held its ground. Farther east *Mardin* is famous as a centre of the sectaries driven into the mountains first by the orthodox Christians, and then by the Mussulmans. Nearly half of the population belongs to various Christian sects—Chaldeans, Syrians, Jacobites, Armenians, besides the more recent Catholic and Protestant converts, who do not live in separate quarters. Mardin is thus a city of mosques and churches, colleges and schools. It is picturesquely situated 3,950 feet above the sea, on a crevassed limestone crag crowned with a white fortress reputed to be impregnable. Some 15 miles to the south-east, the main route towards Nisibin and Mossul passes the issue of a gorge formerly defended by the Byzantine city of *Dara.* The crenelled towers, flights of steps, galleries, and colonnades, hewn in the live rock, have been preserved intact; but the crowds that once swarmed about the portals and temples of this great underground city are now represented by a few Turkoman families crouching here and there amid the caves and piles of refuse.

Farther east lie *Midyat*, metropolis of the Jacobites, and the far-famed *Nisibin* (Nisibis), residence of Tigranes, a Roman bulwark against the Parthians, a "second Antioch," said to have at one time contained several hundred thousand inhabitants. Its site is now marked only by the columns of a temple, and a bridge thrown by the Romans across the Jakhjakh, a foaming torrent rushing headlong down to the Khabur. In the Khabur basin to the south-west of Mardin, Sachau thought he had discovered the long sought for site of *Tigranocertes* in the *Tell Ermen*, or "Armenian Hills" near the village of *Dunaisir.* But no ruins have here been found. *Ras-et-tin*, in the same valley, was till recently the centre of Chechenz settlers from Caucasia, but most of these refugees from the Russians have been massacred by the Arabs, or driven to enlist in the Turkish police service. At the foot of the now almost desert plain runs the broken range of the Sinjar Hills, whose chief town *Singaa*, the *Siagali* of the Kurds and *Beled* of the Arabs, is the principal market of the Yezidis. In the Jebel-Aziz, west of this range, rumour speaks of a "bottomless chasm," where the Yezidis make their yearly offerings of gems, gold, and silver, to the devil.

On the banks of the Euphrates the ruined cities, all marked by mounds crowned with citadels, are more numerous than the still inhabited places, which are themselves mostly mere remnants of larger towns. *Balis* is reduced to a dilapidated castle standing on a chalk cliff, where the river trends south-eastwards to the Persian Gulf. *Thapsacus* has disappeared, and *Rakka*, just above the *Belik* confluence, successor of the Greek cities of *Nikephorion*, *Kallinikon* and *Leontopolis*, has preserved nothing but a few fragments of the palace here built by Harun-ar-Rashid when he made it his capital. On the neighbouring Teffin plains were fought the

sanguinary battles between the armies of Ali and Moavieh, which decided the order of succession in the caliphate at the cost of 70,000 lives.

Zelibi, the ancient *Zenobia*, perched on a crag on the caravan route between Palmyra and Persia, still shows a few scattered remnants of its alabaster monuments. The route is now guarded by the garrison town of *Deïr* (*Der*), the "Convent," which lies 240 miles below Birejik by water. The bridge connecting it with a large and fertile island in the Euphrates was swept away by the floods in 1882. Farther down, the Greek city of *Kirkesion*, till recently supposed to be the Karkhemish of the Hittites, has given place to the wretched hamlet of *Buseirah*, south of which a steep rock overlooking the little town of *Mayadini* is crowned by the superb ruins of the castle of *Rahaba*, supposed to be the biblical *Rehoboth*.

Anah, the ancient Anetho, is a unique town in Western Asia, resembling those straggling places on the Ceylon and Malabar coasts, where an endless line of houses fringes the shaded highways. It extends some five miles along the west bank of the Euphrates, through a marvellous oasis of palm-groves, vineyards, figs, oranges, pomegranates, sugar and cotton plantations. Anah is the capital and chief market of the Bedouins who have their camping-grounds on the plains between Syria and the Euphrates. On the opposite side lies *Ravah*, starting-point of the caravans proceeding to Tekrit on the Tigris.

Farther down follow *Hadihah-el-Uz*, *Jibbah*, and *Hit*, the last-named famous for its asphalte springs. Hit is also an important station of the transit trade between the two rivers, but here the chief riverain port is *Felujah*, terminus of the shortest route from Bagdad to the Euphrates. Near it are the fertile plains of *Saklaviyah*, where are bred tens of thousands of camels and Arab horses, famous throughout the East. These grazing-grounds are continued southwards to the marshy tracts bordering the Euphrates in ancient Babylonia.

"Great Babylon" itself is now nothing more than a plain dotted over with mounds and heaps of bricks, the remains of former palaces and temples. The space enclosed within the walls, 14 miles both ways, or some 200 square miles altogether, is now mainly a wilderness, although south of it lies *Hilleh-et-Feidah*, or "Hilleh the Vast," one of the chief inhabited cities of Lower Mesopotamia. Shaded with date-groves, surrounded by magnificent gardens, laid out with fine streets well kept and lined with rich bazaars, Hilleh skirts the right bank of the Euphrates, communicating with a suburb on the opposite side by means of a bridge of boats 660 feet long.

The huge mound lying nearest to Bagdad, and specially known as *Babil* ("Gate of God"), or *Mujelibeh* ("The Overthrown"), has for two thousand years supplied the bricks used in building all the surrounding cities. Even now whole families, belonging mostly to the Babili tribe, who claim direct descent from the ancient Babylonians, are exclusively employed in quarrying these materials. But on the west side of the river the highest mound is the *Kasr*, or "Palace," which dates from Nabuchodonosor, and which has a circuit of no less than 1,650 yards. Farther south, and on the same side, the *Amran* mound probably marks the site of the hanging gardens. During the epoch subsequent to the death of Alexander,

this hillock served as a necropolis, doubtless owing to the advantages presented by the vaulted galleries supporting the upper platforms. Still farther south the date-grove encircling the village of *Jumjumah* conceals all that remains of the market-place of Babylon, whence have been exhumed over three thousand tablets revealing the financial history of the Chaldean metropolis. On the right bank, at Hilleh, which, according to Oppert, was the industrial quarter, mounds are of rare occur-

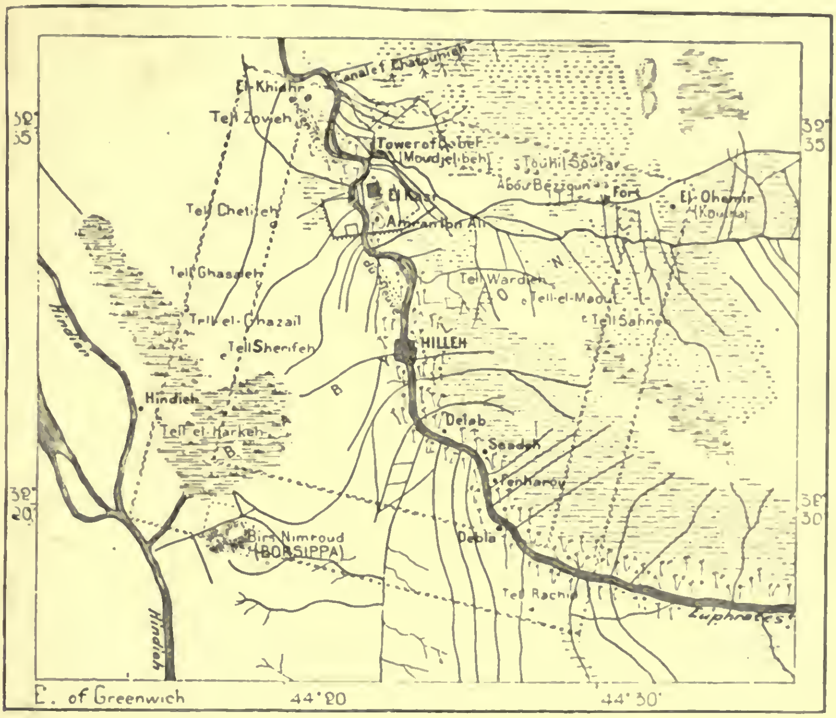
Fig. 91.—The Mound of Babil.

rence, and all vestiges have vanished of the palace here erected by Semiramis over against the Kasr of Nabuchodonosor. The complete disappearance of the monuments west of Babylon must be attributed to the fluvial erosions which have taken place chiefly on the right bank. Extensive strips of soil have been swept away with all their contents, and replaced by fresh alluvial matter. Nevertheless one famous monument still stands towards the south-west, on the site of the ancient *Borsippa*, near the marshes, here stretching at some distance parallel with the

right bank of the river. This is none other than the *Birs-Nimrud*, or "Tower of Babel" itself, traditionally supposed to be the oldest structure in the world, which was to have reached the heavens, but the progress of which was arrested by the "confusion of tongues." Yet this vast heap of earthenware has hitherto yielded no remains anterior to Nabuchodonosor, whose name alone is found inscribed on its brick tablets. According to Rich, it is 140 feet high, exclusive of a broken wall raising its total height to 175 feet, although Strabo gives it an elevation of one stadium, or 660 feet. As far as can be judged from its present aspect, the

Fig. 92.—Babylon.

Scale 1 : 375,000.



Palm-groves. Tilled lands. Pasture. Marshes.

The double square of dotted lines marks the site of the old walls.

6 Miles.

west side was a vertical wall, while on the east side it formed a series of terraces disposed at equal intervals. Long a puzzle to archæologists, this structure is now known to have been the "Tower of the Seven Spheres," a *zigurat* or observatory, like that of Khorsabad.

It is not likely that either Babylon or any of the other ruined cities of lower Chaldea will yield any monumental sculptures or stone records, such as those of the Assyrian cities. Being an entirely alluvial region, South Mesopotamia offered no materials to the builders, except its reeds and scrub, its mud and asphalt, loosely worked up for the Arab hovels, more carefully cast in moulds for durable struc-

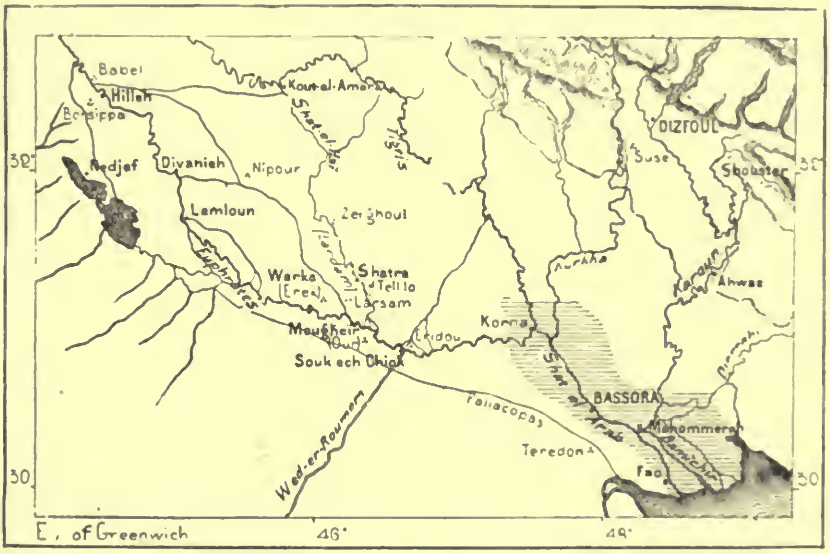
tures. The stone required for the statues of gods and kings had to be brought from the Iranian border ranges, from the shores of Arabia, or even from Egypt. But if the ruins of Babylon contain few monuments or sculptures in stone, they abound in brick tablets of vast antiquity, carrying the records of mankind back many centuries nearer to the origin of human culture. On a canal north of Babel stood the twin cities of *Sippar* and *Aghadeh*, which flourished some forty centuries ago, when the extinct Akkad and Samar nations were struggling for empire. In the same district are the *Abu-Hubba* mounds, with the remains of the temple of the sun, where dwelt Xisuthrus, king of the Chaldeans. The marshy and often flooded region of the lower Euphrates south of Babel is dotted over with the mounds of the ancient *Erekh* (*Uruk*), the *Orkhe* of the Greeks, and *Warka* of the Arabs. This was the city of "books," containing the oldest library in Chaldea, and here hopes are entertained of some day discovering the whole poetic legend of Isdubar, some fragments only of which have yet been found. The history of the Deluge, recorded originally on the bricks of Niniveh, has also been procured in duplicate at Erekh. This place is surrounded by vast cemeteries, extending for many miles in some directions. The dead were doubtless sent from all parts of Mesopotamia to be buried here, just as they are still sent from Persia to Kerbela. In the early Chaldean epochs, other great cities stretched farther south of Babylon. Such was *Ur*, a flourishing place four thousand years ago, of which nothing now remains except an imposing mound, the *Mugheir* or "Bitumen" of the Arabs, so named from the material used in cementing its brick edifices.

Babylon, heir of all these venerable cities, preserves the prestige conferred by long ages of culture and power. The Bedouin approaches its mighty remains with awe The Jews, recalling the "Halls of Babylon," where their fathers wept, look on the place of their captivity as a second fatherland. Here was the seat of a famous school, whence came the learned Rabbi Hillel, whose teachings were enrolled in the Talmud, and here was also the birthplace of the Kabbala. At the time of the journey of Benjamin of Tudelas, in the twelfth century, as many as twenty thousand Jews were settled within the enclosures of ancient Babylon. All the money-lenders of Hilleh are still Jews, and they also hold in mortgage most of the surrounding lands and houses. South of the ruins lies their colony of *Kifil*, grouped round a tomb believed by them to be that of their prophet Ezekiel. To this venerated shrine flock Jewish pilgrims from all quarters, and as many as twenty thousand have at times been encamped on the plain round about the village.

The memories of great Babylon may possibly have also intensified the fervour of the Shiah pilgrims, who gather from the extremities of Persia, from India and the Caucasus, at the holy cities of *Kerbela* and *Nejef*. The former, lying north-west of Babylon, west of *Tuerij*, on the Hindieh, is surrounded by swamps and stagnant waters caused by the overflow of the great canal which runs from the Euphrates to the Nejef lagoon. Kerbela is encircled by avenues of palms, which partly shelter it from the malaria of the neighbouring marshes. But in the very heart of the city, which is also known as *Meshed-Hussein*, stands the cemetery;

or rather the whole place is one vast necropolis. The very houses serve as graves, and earth extracted from them to make room for the dead is retailed in talismanic cakes to the pilgrims. The inhabitants themselves, amongst whom are some thousand Hindus, are chiefly occupied in burying the dead brought hither from all parts of the Shiah world, even from Bombay itself on board the English steamers. Thus the living are ever in contact with the dead, especially in the month of February, when the faithful come to lament over the murder of Hussein. In March they pass on to Nejef, or *Meshed-Ali*, the city of the "Martyr Ali," beneath whose lofty mosque with its gilded domes the bodies are deposited in a vast three-storied crypt, taking precedence according to the price paid by their heirs. A group of hovels a little to the east of Nejef is all that remains of *Kufa*, which was at one

Fig. 93.—OLD CITIES OF CHALDEA.
Scale 1 : 5,425,000.



Old Gulf.

120 Miles.

time capital of the caliphate, and which is said to have been as large as Babylon itself. But this renowned city of letters and art is now known only by those beautiful inscriptions in "Kufic letters" which embellish all the palaces and mosques of the great architectural epoch of Islam. Pilgrims proceeding to the shrine of Ali avoid this place, which they regard as accursed, because here stands the roofless and dilapidated mosque the scene of Ali's murder. Of *Hira* also, another great city, nothing is left but ruins. Near Kerbela is the village of *El-Kadder*, the ancient Kadesia, where was fought the battle which put an end to the national monarchy of Persia. In 1801 the Wahabites seized and plundered Kerbela.

Below Babylon the formerly populous banks of the Euphrates are not yet quite deserted. One of the routes to Nejef traverses the village of *Divanieh* on the right

side, which is here fringed with rice-grounds. Lower down on the same side lie *Samara*, at the mouth of the Shenafieh canal, and *Nazrieh*, a modern place near the junction of the Euphrates and Shat-el-Hai. The latter is inhabited by Arabs of the Montefik tribe, as is also *Suk-esh-Shiokh*, which is situated near the marshes, and which is said to have formerly contained as many as 70,000 inhabitants. This is the only place where the Sabians have a church.

At the confluence of the two rivers stands *Korna*, traditionally supposed to be the "City of Paradise," where may still be seen the "tree of the knowledge of good and evil." But little trade is here done, the chief port on the Shat-el-Arab lying lower down at *Bassorah* (*Basrah*), about midway between Korna and the sea. When Bagdad was one of the great cities of the world, Bassorah, which at that time stood farther west, on a canal communicating with the main stream, was the busiest port in the East, and contained many hundred thousand inhabitants. But partly through inundations, partly through the silting of the canals, it lost all its trade, and of the old town nothing remains except a heap of bricks near the little towns of *Zobeir*, and *Jebel-Sinan*, the latter of which has been identified with the *Teredon* of Nabuchodonosor and Alexander. The new town of Bassorah, dating at least from the sixteenth century, lies nearly 2 miles west of the Shat-el-Arab, on a canal at the mouth of which the English have established their dockyards and warehouses. The Turkish arsenal lies 3 miles higher up, at the busy little town of *Maaghil.* Hundreds of millions of date-palms, noted for their exquisite flavour, flourish in the moist district of Bassorah, the plantations stretching along the right bank of the Shat for some 36 miles, and at some points extending 6 miles inland. On the opposite or Persian side, nothing is seen except a few clumps of neglected date-trees, and the striking contrast between the two riverain tracts has been appealed to as a proof of the superiority of the Turkish over the Persian administration. But the plantations on the Ottoman side belong almost exclusively to the Arabs of the port of *Koreit*, who form a sort of independent commonwealth. Since the opening of the Suez Canal, the value of the Bassorah dates, of which there are said to be seventy varieties, has increased sixfold; yet even before this event the yearly export averaged about £80,000. Cereals also are here grown in such quantities that, to save the cost of transport, wheat is used as fodder and even as fuel.

At the mouth of the Shat-el-Arab lies the seaport of *Fao*, residence of the riverain pilots, the custom house officers and officials connected with the semaphore and telegraph services. The annual traffic at this place exceeds 500,000 tons. On the opposite side the Persian riverain port of *Mohammerah* lies higher up, at the junction of the Shat with the canal flowing from the Karun.

CHAPTER VII.

ASIA MINOR.

THE terms Asia Minor and Anatolia, now used synonymously, are of Byzantine origin; but their meaning has gradually been modified during the course of centuries. But about the beginning of the fifth century of the new era, the expression Asia Minor was already applied to the peninsula comprised between the Cyprus waters, the Euxine, and the course of the Halys, to distinguish it from the rest of the continent, the "Greater Asia," as it was then called. In the same way Anatolia, at first designating a small portion of the Asiatic peninsula, and, under Suleiman the Magnificent, the official name of a particular province, at last acquired a general meaning, replacing the term Rúm or Romania, which custom had attributed to the Byzantine provinces exposed to the invasions of the Osmanli. The Turks themselves use the Greek term under the modified forms of Anadoli or Anadolu, as synonymous with the western expressions, the "East" and the "Levant."

Both terms are now employed in a sufficiently definite sense, being applied to a clearly defined physical region, whose extreme south-eastern angle is marked by the Gulf of Iskanderun (Alexandretta), which penetrates far inland between Cilicia and Syria. The natural frontier at the neck of the peninsula is indicated by the mountain range forming the northern continuation of the Syrian crests, and constituting the water-parting between the Jihun (Pyramis) and the Euphrates basin. But towards the north-east corner the frontier line becomes somewhat vague, where the Pontine Alps run parallel with the Euxine. Here a purely conventional geographical frontier has been traced from the Sivas plateau to the Yasun headland, across the valley of the Ghermili, a tributary of the Yeshil-irmak. Within these limits the peninsula covers an area about equal to that of France, but with scarcely one-fifth of its population.

Yet Anatolia might well sustain as many inhabitants as the richest lands in Europe. Doubtless most of the surface is occupied by elevated tablelands and mountains, the mean altitude being scarcely less than 3,500 feet. But millions might be easily supported in the exuberant valley of the Meander and other plains facing the Archipelago. Even on the uplands of the interior, multitudes might be

sustained where nothing now is seen but the tents of nomad pastors, and where the surface is strewn with cities in ruins. Here the great altitude is balanced by the lower latitude, and on the slopes facing southwards the climate is almost tropical.

General Survey.

Asia Minor enjoys a special advantage in the remarkable development of its seaboard compared with its total area. Eastwards, both on the Euxine and Mediterranean, the coast describes long semicircular undulations, which towards the south-west corners are replaced by deep inlets. Here the great projections themselves ramify into smaller headlands in a sea studded with countless islands and islets. Thus the coast-line between the Dardanelles and Rhodes is at least four times, and including the shores of all the inhabited islands, fully ten times longer than the distance as the bird flies.

At the same time the western section of Asia Minor affords a striking instance of the arbitrary character of conventional divisions. Certainly the islands, peninsulas, and river valleys, right up to the mountains and plateaux of the interior, nowhere present an Asiatic aspect; they belong geographically as well as historically not to Asia but to Europe. On both sides of the intervening waters the climate corresponds; the seaboard has the same appearance and formation; populations of the same race have here settled over against each other, and have taken part in a common historic movement. So far from separating Hellas from Anatolia, the Ægean Sea has on the contrary cemented their union by affording free scope for mutual intercourse from island to island, from shore to shore. As in the days of Herodotus, Athens and Smyrna, on either side of the archipelago, have remained Greek cities, spite of conquests and repeated barbaric invasions advancing at first from east to west, later on reacting from the west to the east.

Nevertheless, a remarkable contrast is presented by the two Greek domains. While the Peloponesus, as indicated by its very name, is rather an island than a peninsula, and continental Greece itself an almost exclusively maritime land, separated by lofty ranges from the northern mainland, the richly diversified Ionian coastlands form on the contrary a natural dependence of the inland plateaux. The communications between the seaboard and uplands are doubtless rendered difficult by the intervening *boghaz* or rugged hills, which often approach close to the shore. In certain places also the river valleys on the Ionian coast are rendered almost inaccessible to each other by the encircling ridges, so that the Hellenes were long enabled here to preserve their original autonomy and culture on the very flank of powerful Asiatic monarchies, from which they were separated only by a few miles of rocky hills. But it is none the less certain that in a general way continuous intercourse, an uninterrupted exchange of commodities, ideas, and even family ties, was from remote times established between the maritime and inland provinces of Anatolia. Herein consists the original character of the work accomplished in the history of human progress by the inhabitants of the peninsula, a region which may be described as consisting of two lands incapsulated one in the

other—a section of the Asiatic mainland, so to say, dovetailed in a detached strip of the European seaboard.

As a highway for the eastern peoples moving westwards, Asia Minor forms the natural continuation of the Armenian plateaux and "Medic Strait." But at this extremity of Asia, a time necessarily arrived when the further western movement of the Asiatic peoples was arrested. In the north-west alone, where the marine waters are contracted in the Bosphorus and Hellespont to the proportions of a river, the migrations from one continent to the other could be effected under easy conditions. Elsewhere the relations between Europe and Asia, impeded by extensive maritime tracts, were carried on, not by the displacement of the masses, but rather by the action of war and commerce. At the same time a decided contrast between the populations of the peninsula was brought about by the physical and climatic differences existing between the elevated inland plateaux and the low-lying maritime region. Thus was developed in Anatolia itself the zone of transition between the inhabitants of the two continents, between Ionians on the one hand, and Lydians or Phrygians on the other. Here also the genius of the maritime Hellenes accomplished that marvellous fusion of all the elements of the arts, sciences, and general culture brought from Chaldea, Assyria, Persia, the Semitic world, and even indirectly from remote Egypt itself. They gave practical effect to all these foreign materials, transmitting the new inheritance to their kinsmen in the archipelago and on the coasts of continental Greece. Anatolia has been likened to a hand extended by Asia to Europe. But this hand would have failed to impart its benefits but for the Hellenes acting as intermediaries between the two continents.

In few other regions of the globe has more history, in the language of Curtis, been condensed within a narrower area. Rival populations were irresistibly attracted to a seaboard presenting so many physical advantages—a delightful climate, a coast diversified by endless inlets and headlands, rich alluvial plains yielding in abundance all kinds of plants useful to man. On the one hand, the inhabitants of the plateaux and inland valleys sought to retain possession of the riverain valleys giving access to the Ægean Sea; on the other, the seafaring peoples, traders or pirates, endeavoured to gain a footing on such inviting territory. After long vicissitudes of sanguinary struggles and wholesale extermination, commemorated in the old myths and poems, the issue was decided in favour of the more active and energetic maritime tribes. Greeks of diverse stocks, Leleges, Ionians, Dorians, seized the most convenient seaports, and the towns founded by them rose to great power and influence. They became the true cradle of Western culture, for from these centres were diffused those combined elements of the various Egyptian, Syrian, Persian, and Indian civilisations, those artistic and scientific impulses by which the European world is still vivified. Here the Homerides sang the oldest songs of Mediterranean literature; here Ionian art attained the acme of its grace and splendour; here their sages enunciated those problems on the constitution of the universe which are still discussed by modern philosophy; and it was in Miletus, a renowned Anatolian city, that over two thousand four hundred

years ago the first charts were engraved on bronze plates by Anaximander, Hecatæus, Aristagoras. Yet full justice is rarely done to these Asiatic Hellenes. Just as for many centuries Greece itself was viewed through a Roman atmosphere, so by a natural law of perspective Hellenic Anatolia is still contemplated, overshadowed, as it were, by continental Greece. Now, however, the discoveries of archæology have shown that Asiatic Greece not only took the lead in point of time, but was never surpassed by her European sister in the works of art. "Ionian culture," writes Perrot, "was the springtide of Greek culture. To her the world is indebted for epic and lyric poetry, the firstlings of Hellenic genius." Asia Minor was the birthplace of Homer, of Thales, of Heraclitus, Pythagoras, and Herodotus. And while the full blaze of science and letters seems in European Greece to be mainly centred in Athens, it was diffused on the Asiatic side throughout many centres, such as Pergamus, Smyrna, Ephesus, Miletus, Halicarnassus.

But how profound the difference between the Ionia of those days and the modern Turkish province of Anadoli! So striking is the contrast, that the name of Asia Minor conjures up the memory of its glorious past, without a thought for its present state of decay. The tongue refuses almost to name its cities and provinces by their contemporary designations, and the mind loves to still think of them as they existed two thousand years ago. Nevertheless, it would be unfair merely to echo the current charges against the Osmanli, as if they alone were to blame for the decadence of Anatolia. As Chihacheff remarks, its Turkish conquerors succeeded to an already ruined inheritance, ruined by the repeated devastating wars and massacres that followed each other from the arrival of the Romans down to the Crusades and the Mongol incursions. Some of the changes that have ensued must also, perhaps, be attributed to climatic conditions and to a bad treatment of the soil. Of timber-growing lands, few have suffered more than Asia Minor from reckless waste. Many old records speak of forests covering extensive tracts, where nothing is now to be seen but arid solitudes or stunted scrub. The extremes of temperature between the seasons have certainly been intensified by the disappearance of the woodlands. To the same cause are due the prolonged droughts and the sudden inundations in the riverain valleys. Less subject to control than formerly, the running waters have developed vast morasses, poisoning the atmosphere and almost depopulating whole districts. In certain low-lying tracts the villages standing on the sites of once flourishing cities are altogether uninhabitable in summer. In some of the most dangerous parts, the malarious exhalations are felt even at altitudes of 6,000 feet. And besides the devastations of miasmatic endemics, the country has also been frequently ravaged by frightful epidemics, which have spread thence westwards to the seaports of Italy, France, and Spain.

But despite the present deplorable condition of Anatolia, symptoms are not lacking of a brighter future. The work of European culture is no longer restricted to the peopling of new worlds across the Atlantic and at the Antipodes. It has also begun to re-act on the eastern lands whence came the first elements of its civilisation. The work of geographical exploration has already been all but

accomplished along all the main lines of communication across Anatolia, and this general survey is now being complemented by more detailed and accurate local research. From the seaboard the progress of discovery is moving inland, where a rich field of exploration awaits the archæologist in the numerous artificial mounds, piles of refuse, sepulchral monuments, broken shafts, dismantled strongholds, half-buried cities, strewn over the plateaux.

Anatolian Mountain Systems.

The Anatolian rectangle may, roughly speaking, be described as a plane inclined towards the Black Sea. All the more elevated lands and main ranges are

Fig. 91.—Old Provinces of Asia Minor.

Scale 1 : 11,000,000.

AIDIN Names and limits of the Vilayets. LYDIA Names and limits of the Old Provinces.

180 Miles.

massed in the southern section of the peninsula, along the Mediterranean seaboard. The northern slopes of these uplands merge imperceptibly in the central plateaux, which are themselves furrowed in every direction by river valleys, gradually broadening out and draining to the Euxine. But in the extreme north, where the coast-line advances in a vast convex curve into the sea, independent and almost isolated masses rise between the Kizil-irmak and Sakaria river basins, skirting on its northern edge an extensive central plain, whose deeper parts are still flooded by the remains of an inland sea. The ranges which follow at some distance the line of the southern shore, and which are broken into irregular chains and mountain masses, are mainly disposed in the form of a crescent, with its convex side facing the Mediterranean, and thus corresponding to the northern curve turned

towards the Euxine. This southern orographic system takes the collective name of the Taurus.

But like that of the Caucasus, this appellation of Taurus was one of those vague terms applied by the ancients to different and often far removed ranges. The term Davr or Davri, still occurring throughout the whole of the peninsula, is merely a modified form of the same word. But according to the most accepted usage, by Taurus was understood the whole system of crests running from the western headlands of Anatolia to the unknown regions of the extreme east, and forming the diaphragm of the continent. At present the name is still applied in a general way to several distinct chains of Hither Asia, each, however, carefully distinguished by some secondary local designation. Thus the Armenian Taurus comprises collectively the whole of the south-western Armenian highlands which are pierced by the Euphrates on its way to the Mesopotamian plains. The Cilician Taurus forms in the same way the angular rampart rising above the valley of the Seihun in the south-east corner of Asia Minor, and this again is followed from east to west by the Isaurian, Pisidian, and Lycian Taurus. The local Turkish names, whose sense is more defined, are applied to distinct highland groups.

In the regions of Upper Armenia and Pontus, lying north of the Murad, the continental axis is formed by the Pontine ranges skirting the Black Sea, whereas in Anatolia it trends southwards to the Mediterranean. But both systems are connected by a transverse ridge running north-east and south-west, in the same direction as all the hills, valleys, and coast lines in this part of Asia Minor. The first link between the Pontine and Cilician Alps is the Karabel-dagh, which runs from the great bend of the Euphrates at Eghin to the head-streams of the Kizil-irmak. It attains at one point an absolute elevation of 5,800 feet; but relatively to the surrounding plateaux, which have a mean altitude of 5,000 feet, it presents the appearance of a very moderately elevated chain of hills. With it begins the system of the Anti-Taurus, which develops a series of parallel barriers running in a south-westerly direction, and standing out all the more boldly that their base has been profoundly eroded by the Seihun and its tributaries. Besides, these rocky walls, intersected at intervals by narrow difficult passes, really increase in altitude as they advance southwards. The Khanzin-dagh ("Wild Boar Mountain"), and Bimbogha-dagh ("Mountain of the Thousand Bulls"), and some other peaks, remain snow-clad till the month of July, while many rocky gorges develop perennial snow-fields. One of the Kozan-dagh crests rises to a height of 9,350 feet, and another in the Kermez-dagh chain, east of the river Seihun, attains an elevation of 10,650 feet. The copious rainfall on this southern portion of the Anti-Taurus, as compared with the rolling plateaux farther north, fosters a much richer vegetation, in which extensive woodlands are interspersed with grassy and flowery slopes. Some of the valleys draining to the Seihun thus present a striking contrast in the variety of their plants and their brilliant verdure to the impoverished flora of the central Anatolian regions.

The Anti-Taurus and Cilician Taurus.

The various broken ridges, which follow each other in a general south-westerly direction, with a slight convexity towards the west, bear no collective local designation. Nor can the term Anti-Taurus applied to the system by geographers be justified, for it does not stand like a rival over against the Cilician Taurus, but both of these highlands belong to the same orographic system, interrupted only by a slight intervening fault. The Anti-Taurus forms a continuation of the Cilician mountains, in the same way that in the Pyrenees the Mediterranean forms a continuation of the Atlantic section, from which it is separated only by the Aran Valley. In the Tauric system the breach is formed by the valley of the Zamantia-su, the most copious western affluent of the Seihun. To the west rise the Ala-dagh crests, forming the northern extremity of the Cilician Taurus; eastwards the Ghadin-bali and Kozan-dagh form the southern termination of the Anti-Taurus, although the Kaleh-dagh, the Khanzir-dagh, and several other chains regarded as belonging to this section of the Tauric highlands, are continued to the west of the Zamantia-su. Farther east the Kermez-dagh merges through the Berut group (8,000 feet) in other parallel ramparts, as regularly disposed as those of the Anti-Taurus, but running in a different direction, from west to east. These constitute the Armenian Taurus, which deflects the Euphrates for some distance eastwards, before allowing its waters to escape through a series of deep gorges southwards. On the south the Ghiaur-dagh, or "Mountain of Unbelievers," so named from the Greeks and Armenians inhabiting its valleys, forms the south-eastern barrier of Asia Minor, which is here clearly marked by the deep valley of the Ak-su, flowing to the Jihun. The Ghiaur-dagh, which runs north-east and south-west, is connected by a transverse ridge with the Syrian Amanus range. Interrupted by profound depressions, it reappears on the Gulf of Alexandretta, where it develops the two headlands of Jebel Nur and Jebel Missis. These hills are skirted southwards by the Jihun, beyond the broad alluvial plain of which they are continued by a number of heights, formerly islets in the gulf, but now connected by swampy tracts with the mainland, and terminating abruptly in the steep promontory of Kara-tash, or the "Blackrock."

The Cilician Taurus, properly so called, begins with the majestic Ala-dagh, which culminates in the Apish-Kardagh, over 11,000 feet high. But here the crests are so entangled in a labyrinth of other transverse or parallel ridges, that a clear idea of the main axis, with its snowy peaks, can be formed only by surveying it from some commanding summit at a distance. And although forming the south-eastern scarp of the Anatolian plateau, these lofty uplands nowhere form a true water-parting. Two rivers rising on the uplands north of them force their way through the Ala-dagh on their course to the Seihun, which is itself formed by all the streams issuing from the parallel valleys of the Anti-Taurus. The two gorges traversed by the Goklu-su and Chekid-su are absolutely impracticable, so that the range has here to be crossed by dangerous passes, one of which in the old itineraries is named the Karghah-Kermez, "Impassable by the Raven." The only route by which

artillery could penetrate from the coast to the interior of Anatolia ascends the river Cydnus north of Tarsus, beyond which it plunges into the lateral gorge of the Gulek-boghaz, thereby turning the escapments skirting the west side of the Chekid-su ravine.

The Pylæ, or "Cilician Gates," as this passage is called, have an altitude of 3,200 feet, and were at all times of vital strategic importance. Here terminates the diagonal line running from the Bosphorus across Asia Minor to the Gulf of Alexandretta, and this route must be taken by military expeditions advancing from Constantinople towards the Syrian coast, or towards the great bend of the Euphrates where it enters Mesopotamia. No highway is more famous in the annals of warfare than this narrow defile, where converge all the routes of the peninsula. Even before the days of Xerxes and Alexander it had been forced by many invading hosts, and since then it has been frequently used down to recent times. In 1836 Ibrahim-Pasha, victorious at Nizib, strongly fortified the Gulek-boghaz to bar the road against the Turkish armies. All the paths crossing the crest were also rendered impassable by artificial works, and the whole of the Cilician Taurus was converted into an impregnable citadel. Some remains of the formidable Egyptian lines are still visible, as well as some older works constructed by the Genoese and Armenians. Above the route traversing the Gulek-boghaz, may be distinctly seen the remains of an ancient road cut in the live rock either by the Assyrians or the Persians. At the narrowest point of the defile stands a ruined altar with two votive tablets, the inscriptions on which have been effaced, as has also the flight of steps leading up to the gates, which were closed in time of war. At present the Cilician Gates have lost their strategic value, but retain their commercial importance, notwithstanding the charges imposed by the inland custom-houses on every camel-load. All the gorges intersecting the Taurus range present a meteorological phenomenon analogous to that observed in the Sefid-rud ravine between the Iranian plateau and the Caspian lowlands. A fierce wind here constantly prevails, blowing alternately up and down the narrow valleys according to the diurnal oscillations of temperature.

The whole of the western section of the Cilician Taurus, terminating eastwards at the Chekid-su Valley, is specially known as the Bulgar-dagh. This is the range visible from the sea along the northern horizon, and pointed out to travellers as the "Taurus" in a pre-eminent sense. And it certainly is one of the loftiest Anatolian chains, as well as one of those which, in their bold outlines, jagged crests, and rich vegetation, most resemble the west European highlands. But the culminating peaks of the Bulgar-dagh are rather more elevated than those of the Pyrenees, and they are also disposed parallel to a marine shore, where the white groups of houses are seen nestling amidst dense tufts of the feathery palm. The highest point of the Bulgar-dagh, 11,650 feet, or some 300 feet higher than Maladetta in the Pyrenees, is locally known by the name of Metdesis. It was first ascended in 1836 by the engineer Russeger, who from its summit enjoyed a superb prospect, embracing all the chief peaks of the range, and the chaos of uplands limiting the north-eastern horizon. Here the mountains present an endless variety of form and

colour, terraces, pyramids, needles, some red or yellow, others grey or black, and ever shifting with the shifting lights. In these spurs of the Bulgar-dagh are situated the rich argentiferous lead mines of the Bulgar-maden, beyond which rise the Ala-dagh and Anti-Taurus. To the north are faintly mirrored the great lakes of the plateau, above which sparkle the eternal snows of Arjish, culminating point of the peninsula. Southwards the view commands the slope of the whole range, with its advanced spurs and ramparts, beyond which are visible the shores of Syria as far as Latakieh, and in the midst of the blue waters the faint outlines of the Cyprus hills in the hazy distance.

Notwithstanding its southern position and complete exposure to the solar rays, the Bulgar-dagh remains wrapped for several months in a snowy mantle, while its

Fig. 95.—The Bulgar-dagh.

Scale 1 : 240,000.

6 Miles.

higher gorges are sometimes completely blocked throughout the year. A small glacier was even supposed to exist on the slopes of Mount Chuban-huyu, near the Metdesis peak. But the massess of transparent bluish ice here discovered are due to a copious spring, by which the snow is melted, and the water soon again frozen to ice during the cold nights.

Seawards the Cilician Taurus presents a much more imposing appearance than towards the interior, where its absolute height is lessened by the mean altitude of the plateau, which considerably exceeds 3,000 feet, and which is connected by numerous transverse ridges with the Bulgar-dagh and Ala-dagh. An interrupted series of mountains follows successively between the Taurus and the Hassan-dagh, which latter groups, however, belong to a different geological system. They form part of the extensive volcanic region, which at one time displayed intense igneous

activity on the shores of the ancient inland sea occupying the centre of the peninsula. This plutonic mass culminates towards the north-east in the mighty Erjish (Arjeh), the Argæus of the ancients, which is the highest peak in Anatolia, as was already known to Strabo, who was born some distance to the north of the volcano. According to Chihacheff, the southern edge of the crater is 12,800 feet high, and above it some vertical rocky walls rise some 300 feet higher. But the report current in Strabo's time, that both the Euxine and "Sea of Issus" were visible from its summit, has no foundation in fact. Southwards the Mediterranean is concealed by the intervening Bulgar-dagh and Ala-dagh, while towards the north-east the vague outlines of the Pontine highlands are scarcely visible in the clearest weather.*

Mount Argæus—The Isaurian and Lycian Taurus.

Mount Argæus rests on a very lofty pediment. Even the northern plain of Kaisarieh, the lowest of all the surrounding lands, has an elevation of over 3,300 feet, whilst a depression separating the central mass from another volcanic group towards the west exceeds 5,000 feet. The mountain properly so called is encircled by spurs, cones, and lava streams, giving to the whole group a total area of about 450 square miles. The southern ascent, chosen by Hamilton, the first to scale the cone in modern times, passes successively over broad tracts disposed in a series of terraces round the highest cone, which is 2,650 feet high, and scored by deep crevasses and divergent ravines describing a pendant necklace of white snow round the crater, and descending in long streaks amid the reddish scoriæ. On these furrowed heights the least change of temperature during the night suffices to arrest the progress of the snowy masses, which with the morning sun become again disengaged, and then continue to rush down the slopes, bounding from crag to crag, across the crevasses. When the snows begin to melt in spring, the danger from this cause becomes so great that the ascent has to be made at night "before the mountain is awake." In summer the snow disappears altogether from the southern slopes; but some remains throughout the year in the deep crater, where it even forms real glaciers.

In the time of Strabo the cone was not yet quite extinct. Its slopes were covered with forests, which have since disappeared; but the surrounding plain was "undermined by a subterranean fire," frequently emitting flames, and so late as the fifth century Claudian still speaks of the "burning summits" of Argæus. Chihacheff refers to the coins found in the neighbourhood of Kaisarieh representing the crater in a state of eruption; and although in modern times no trace has been observed of vapour or carbonic acid springs, the scoriæ, lava-streams, and craters everywhere present the appearance of recent cooling. The Ali-dagh to the north-east, the Sevri-dagh to the south-west, and hundreds of other eminences dotted over this igneous region, have preserved their craters. Of these the highest, next to Argæus, are those of the Hassan-dagh, which attain an elevation of nearly 10,000 feet. They are connected towards the south-east with the scarçely less elevated

* Altitude of Mount Argæus, according to Hamilton, 13,200 feet; Cooper, 13,300; Tozer, 13,350.

Yeshil-dagh, whose vertical walls and basalt colonnades rise abruptly above the plains. Towards the south-west the volcanic range merges in the Karaja-dagh, which extends for 120 miles beyond Argæus. One of the craters of this range, visible in a saline lakelet five miles south-east of Karabunar, presents the probably unique appearance of an oval bowl, with the rim gradually rising towards the east, where it terminates in a vertical spout.

West of the Cilician Taurus the whole seaboard between the gulfs of Taurus and

Fig. 96 —Mount Argæus.

Scale 1 : 540,000.

Adalia is occupied by a labyrinth of highlands known as the Isaurian Taurus. Here geographers have not yet succeeded in positively identifying the Cragus, Imbarus, or Andricus of the ancients, names which were applied especially to the peaks visible from the coast, whatever might be their importance relatively to the more elevated summits of the interior. In this region the chief group is that of the Gök-kuh, or "Celestial Mountain," whose highest crests attain an altitude of 10,000 feet. Most of the ridges connected with it are disposed in the direction

from north-west to south-east, parallel with those skirting the east side of the Gulf of Adalia. None, except the Gök-kuh, exceed 5,000 feet; yet, despite their moderate elevation, the Anatolian seaboard nowhere presents a more rugged aspect than on the coast of Cilicia Trachæa, as this district was named in opposition to the low-lying shores of Cilicia Campestris, stretching along the foot of the Bulgar-dagh towards the Gulf of Alexandretta. Headlands of schists, conglomerates, limestone, or white marble follow almost uninterruptedly around the convex coast-line over against Cyprus. Coming westwards the first of these headlands, some of which rise in vertical cliffs 600 or 700 feet above the waves, is the superb promontory of Manavat ("Cavalier Point"), almost detached from the mainland, and thus forming a natural stronghold, which has been further strengthened by defensive works and ditches cut in the live rock. A few miles farther east is Provençal Isle, another marble rock completely surrounded by water, and also crowned with a fortress standing amidst the débris of houses and chapels. These remains of military and religious structures, as well as the names of the cape and island still current along the coast, recall the presence of European Christians in the district. The two Cilician rocks were amongst the fortresses ceded by Leo, King of Armenia, to the pope about the end of the twelfth century, and here the knights of Saint John of Jerusalem established a refuge for liberated Christian slaves. The other headlands west of Cavalier Point, if less interesting historically, are none the less picturesque. Cape Kizliman, which is attached to the mainland by a low isthmus, consists of perfectly regular strata with the most varied and brilliant tints—red, violet, brown, yellow, and deep blue. Farther on, Cape Anamur marks the southernmost point of Asia Minor.

North of the Trachæan highlands, the isolated Kara-dagh, or "Black Mountains," rise like an island amidst the uniform plains of Konieh. This group lies on the prolonged axis of the chains, which stretch north-westwards for some 120 miles beyond Konieh. The eastern rampart, skirting the Central Anatolian depression on the west, is broken by numerous breaches, and has a mean altitude of scarcely more than 800 or 900 feet above the plateau. But at its north-western extremity it terminates in the Emir-dagh and Keshir-dagh, which attain a somewhat greater elevation, and which afford abundant pasturage during the summer heats. The western section, known as the Sultan-dagh, possibly on account of its greater height, forms a lofty range towards the east; but west and north it merges in many places with the hilly tableland, where rise the Ghediz-chai, Meander, and other streams flowing to the Ægean Sea.

South-west of the Sultan-dagh, the hills gradually increase in height as they advance seawards. In Pisidia, where the Boz-burun, or "Grey Head," falls little short of 10,000 feet, they run north and south; but in Lycia they are mainly disposed north-east and south-west. In the Lycian Taurus the Ak-dagh, or "White Mountain," attains an altitude of 10,250 feet, and is almost rivalled by the Suzuz-dagh facing it on the east, and possibly surpassed by the Bei-dagh east of Elmalu, which is said to have an elevation of 10,500 feet. Next to Metdesis, the Ak-dagh and Bei-dagh are the loftiest summits in the Tauric system, and from

their greater vicinity to the sea they present a still more imposing appearance. The northern slopes of the Lycian Taurus are covered or flecked with snow throughout the year. To their white crests many of the uplands in this part of Asia Minor are indebted for their designation *bali*, a term almost identical with the

Fig. 97.—The Chimæra of Lycia.

Scale 1 : 450,000.

Slav word for *white*, which is also applied to snowy summits. But the general appellation of Taurus has also been preserved in the local nomenclatures; and the chain beginning at the southern extremity of lake Egherdir and forming the main axis of all the branches ramifying towards the Lycian coast, still bears the name of Davras or Dauras (Taurus).

On the east coast of Lycia the wooded and fissured Takh-talu, the Solyma of the ancients, rises to a height of 7,300 feet. On the southern slope of this majestic peak lies the famous Chimæra, which burns night and day, and which has given rise to so many fables. The Yanar, or Yanar-tash, source of the everlasting fires, wells up from a fissure about 3 feet deep, above which stand the remains of a temple. The flame is perfectly smokeless, and a few yards off the serpentine rock whence rises the mysterious fire, has a temperature no higher than that of the surrounding soil. Plants flourish in the immediate neighbourhood, which is watered by a shadd stream. The shepherds of the district often prepare their food in the Chimæra, which, however, according to the legend, refuses to cook stolen aliments. Another fissure resembling the Yanar is now extinct, nor has any escape of gas been observed on the spot. This district, where underground rumblings are said to be occasionally heard, was formerly known by the name of Mount Phœnix, and one of the neighbouring villages still bears the designation of Phineka. Eagles and vultures incessantly hover above the flaming rock, a circumstance which may possibly have inspired the legend of the phœnix springing eternally from its ashes.

Like those of Cilician Trachæa, the Lycian promontories mostly terminate abruptly in white limestone headlands, contrasting vividly with their dark pine forests. The seaboard, indented by numerous inlets, presents in its peninsular formation a forecast of the insular groups on the west coast. Here a Greek or Italian nomenclature begins to prevail. Thus Castel Orizzo (Castel Rosso), the largest island on the coast, probably takes its Italian name from the reddish tints of its rocks. The promontory and islets of Chelidan (Chelidonia) at the south-east corner of Lycia, are so called by the Greeks from the swallows frequenting them; and farther on the harbour of "Port Genovese" occurs on the east side. In the straits winding between the Chelidan islands, the currents, which set steadily from Syria along the Anatolian shores westwards, are more rapid than elsewhere in the Levant. After striking the cliffs of Adalia, which project like a huge barrier across their course, they are deflected to the left, escaping with great impetuosity through the Chelidan channels to the high seas. At certain points the stream attains a velocity of nearly three miles an hour. Amongst the other curiosities of this archipelago is a freshwater brook in the islet of Grambusa, apparently far too copious to be maintained by the rainfall on such a small area. Hence the conjecture that it flows in an underground channel from the mainland, although the intervening strait is no less than 170 feet deep.

The West Anatolian Coastlands and Islands.

The western section of the Anatolian plateau does not fall uniformly towards the Ægean seaboard, whose numerous indentations find their counterpart along the face of the escarpment, even still more complicated by lateral ramifications like those of the Norwegian fiords. The uplands are thus frayed, so to say, like the ravelled edge of a textile fabric, the main axes being disposed mostly in parallel

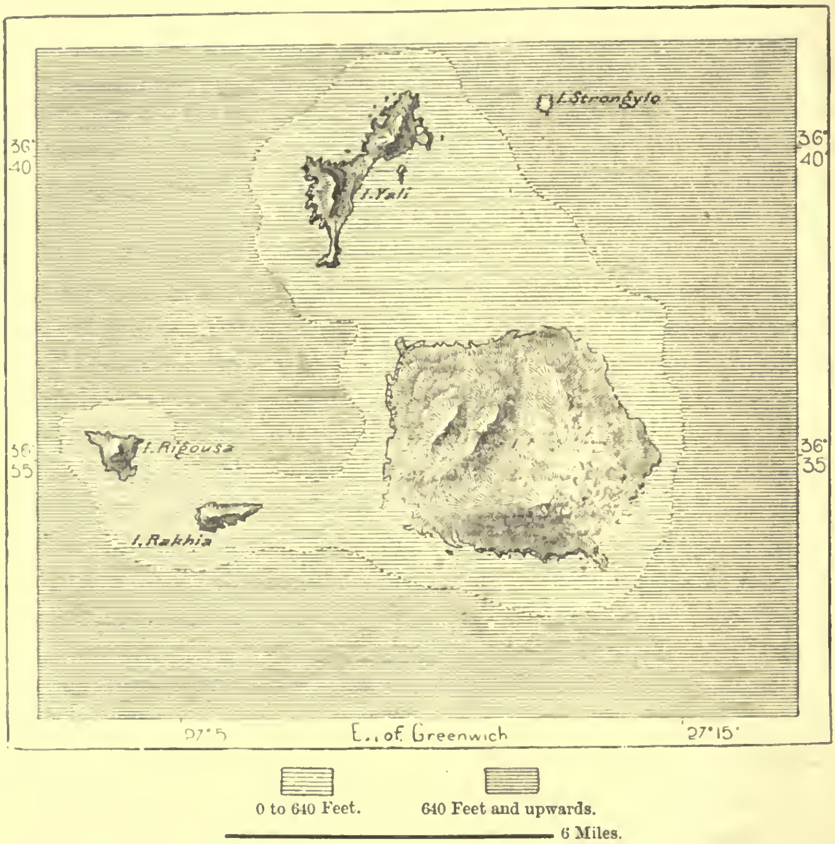
lines falling in successive terraces seawards. Detached from these by profound fissures are other ridges, which in their turn are interrupted by broad, verdant depressions connecting together the fertile plains on either side. Farther on the ranges reappear, projecting as peninsulas far into the Ægean, where they terminate in precipitous headlands. But the mainland vanishes only to emerge again in hilly islands, which are themselves continued by lower insular groups, gradually dying away in still smaller islets and reefs. The continental uplands and insular masses thus belong to the same formation, so that with a change of sea level new islands would either be developed farther inland, or else the archipelagos become converted into promontories projecting seawards.

This broken section of the plateau, which develops towards the south-west an intricate highland system, begins with the majestic Baba-dagh, or Cadmus of the ancients. It rises to a height of 10,200 feet, and is skirted eastwards by a depression connecting the basin of the Meander, which flows to the Ægean, with that of the Duluman-chai, draining to the Sea of Rhodes. South of the Baba-dagh, the Boz-dagh, or "Gray Range," falls gradually to heights of 3,000 and 2,000 feet, and even less, so that the spurs projecting from the south-west corner of Anatolia far into the sea have a very moderate elevation, although still presenting an endless variety of bold and fantastic forms. Here the insular eminences are higher than those of the mainland, Mount Attairos, in Rhodes, attaining upwards of 4,000 feet, and exceeding Mount Lastos in Karpathos only by some 60 feet. From this culminating point a clear view is afforded of the eastern extremity of Crete, which is connected with Anatolia by a submarine bank 1,000 to 1,200 feet deep, with abysses of from 6,500 to 7,000 feet on either side. North of Rhodes another headland is continued by the islet of Symi, while the long hilly strip terminating at Cape Krio reappears at Nisyros, whose pyramidal cone rises to a height of 2,300 feet. Farther on the peninsula of Halicarnassus is separated only by narrow rocky channels from Kos and the Kalymnos and Leros insular groups. It is noteworthy that Nisyros, the only still active volcano in Asia Minor, stands exactly at the corner of the peninsula, between the Ægean and the deep basin of the East Mediterranean Sea. At present the only visible indications of igneous activity are the clouds of smoke with a temperature of over 220° F., the jets of vapour, and crystallised sulphur deposits. The underground energies are stimulated during the rainy season, when the bottom of the crater is converted into a sulphurous lake with the temperature of boiling water. This crater is used as a sort of refinery by the people engaged in the sulphur trade. According to a Greek legend, Nisyros was a fragment of the island of Kos, hurled by a god into the sea. In reality the surrounding lands have been largely formed by the matter cast up by Nisyros during its former explosions. Thus the islet of Yali, lying between Kos and Nisyros, consists of such volcanic tuffa alternating with travertine abounding in fossils. According to M. Gorceix, this islet has undergone continual changes of level, continued down to the present time, thus attesting the uninterrupted play of the subterranean forces in the neighbouring volcano. In this part of the Mediterranean the tides are very perceptible, rising about one foot in the Gulf of Symi.

The same Baba-dagh group, whence radiate the south-western spurs of the peninsula, also projects westwards a branch interrupted at intervals by deep valleys. Above the crest rise several peaks considerably over 3,000 feet high, and towards the western extremity the Besh-Parmak, or "Five Fingers," attains an elevation of 4,570 feet. North of the Meander Valley, the range projecting westwards from the plateaux is much more regular than the Baba-dagh system. Known by various local names, but generally spoken of by the Greeks by its old appellation of Misoghis, this chain extends uninterruptedly for a distance of 84 miles

Fig. 98.—Nisyros.

Scale 1 : 230,000.



from the Meander gorge near Buladan, to the Scala Nova promontories in the gulf of Ephesus. The highest crests, whose mean height scarcely exceeds 3,000 feet, follow in regular succession from east to west, without any intermediate depressions. Yet the whole range presents the most varied outlines, thanks to the terraces of conglomerate skirting its base at an altitude of from 300 to 450 feet, and cut into cubic and pyramidal figures by the mountain torrents. Here the cultivated terraced tracts and the dense foliage of the valleys present a striking contrast to the red tints of the detritus swept down and deposited by the torrents as alluvia in the Meander Valley. All these crumbling rocks are evidently the

remains of sedimentary formations, deposited during an older geological epoch, when the Anatolian seaboard was more deeply submerged than at present.

Towards its western extremity, the Misoghis range falls as low as 800 feet at one point, where it is pierced by a tunnel on the railway, running from Smyrna up the Meander Valley. This depression separates the main chain from the Gumish-dagh, or "Silver Mountain," which abounds in deposits of emery and other minerals. Southwards the Lower Meander is skirted by groups of hills facing the Besh-Parmak escarpments, beyond which the jagged crests of the Samsun-dagh, the Mycale of the ancients, are seen stretching east and west. Here the Asiatic seaboard of the Ægean Sea culminates in the rocky pyramid of Rapana, which rises to a height of 4,180 feet about the centre of this range. Immediately to the west is a somewhat less elevated but more venerated peak, on which stands a ruined shrine dedicated to the prophet Eliah, who has replaced Apollo-Melkarth as the tutelar genius of the Ionian Greeks. Over against it lies the island of Samos, terminating westwards in the still loftier peak of Kerki (5,900 feet), beyond which are visible the summits of Nikaria (over 3,000 feet), and towards the south-west Patmos and other islets are dimly seen, now like deep shadows, now like luminous vapour floating on the purple waters. The strait separating Samos from the mainland is less than a mile and a half wide, and even this is divided by a rocky islet into two channels. From the town of Samos is visible the last promontory of the mainland, which has retained its old name of Mycale, changed by transposition of syllables to Camilla or Camello.

North of the Misoghis chain is developed another of the same elevation, the Tmolus of the ancients, terminating immediately to the east of Smyrna, and forming jointly with the Misoghis a vast semi-circle round the valley of the Cayster. West of this valley the hills break into independent groups, which were formerly separated by broad straits from the mountains of the interior. The Alaman-dagh, the Gallesion of the ancients, has preserved its insular aspect, the verdure clothing its spurs and penetrating into its gorges serving to define its outlines as sharply as might the marine waters themselves. Differing from nearly all the other Ionian chains, which run normally east and west, the Alaman-dagh is disposed in the direction from north to south, as is also the more westerly ridge, which crosses the Smyrnian peninsula, terminating with the twin peaks of the Two Brothers, whose wooded slopes overlook the entrance of the roadstead. Farther on another and loftier chain follows the same direction from Cape Karaka to the Mimas or Kara-burun promontory. Chio, the nearest island to this part of the coast, also runs north and south, differing in this respect from all the other islands of the Ionian Archipelago. Chio culminates northwards with Mount Saint Elias (4,220 feet), which occasionally remains covered with snow for a few days, or even weeks in winter, whence perhaps the name of the island (*khion*, snow).

The rocks of Chio belong to various geological epochs, and the underground forces are still at work producing fresh formations. Igneous rocks, such as serpentine, porphyries, trachytes, occur in several places, as well as in the neighbouring Erythrean peninsula, for the two parallel ridges, here separated by a marine

channel scarcely 80 feet deep, are comprised within the same area of volcanic disturbance. This district of Ionia, one of the richest in thermal springs, is also one of those that have suffered most from subterranean convulsions.

During the second half of this century, the town of Chio was destroyed by a tremendous earthquake seldom exceeded in violence, and the island was again shaken in October, 1883, when the springs were dried up or replaced by others,

Fig. 99.—Tmolus Valley, Plain of Sardis.

several villages and parts of towns overthrown, and over 50,000 people rendered houseless.

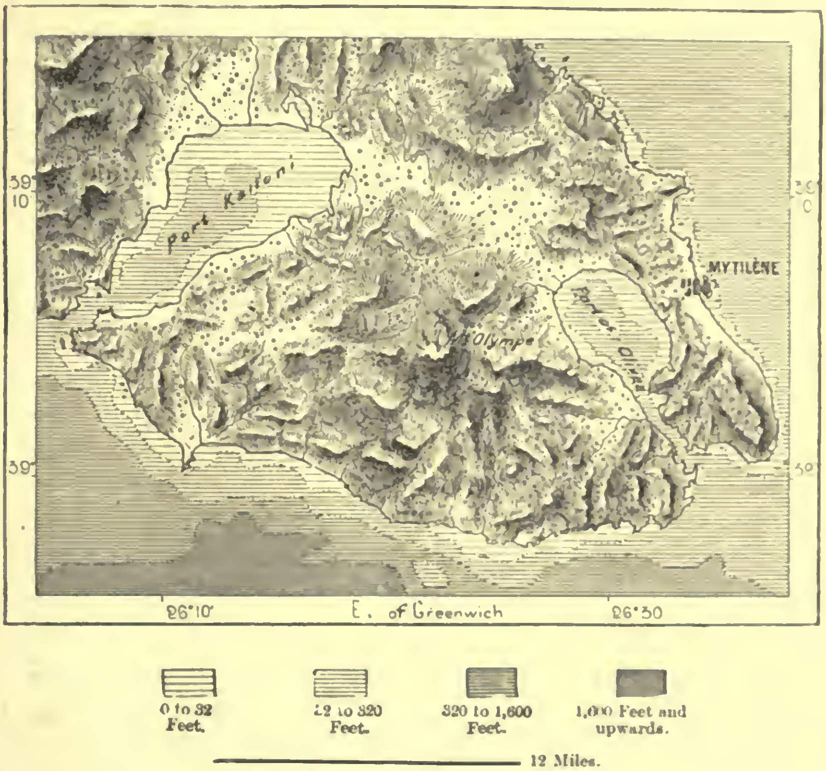
The chain, connected by a low depression with Mount Tmolus, and bending westwards round the north side of Smyrna harbour, is famous in legend and history as the Sipylos of King Tantalus; and over against the city stands the "Seat of Pelops," where reigned the chief of the family that gave its name to the Peloponnesus. The old writers speak of frightful earthquakes, which destroyed the cities

and "devoured" Sipylos. No trace can now be detected of these convulsions; but all the western section of the range, that is, the Yamanlar-dagh of the Turks consists of eruptive rocks. The Manissa-dagh, or "Mountain of Magnesia," as the western part of Sipylos is called, is formed of chalk cliffs, which on the north side terminate abruptly in lofty walls diversely coloured, pierced by caves, and broken by faults, which seem to traverse the mountain in its entire thickness. East of the Manissa-dagh the northern slope of Tmolus, here known as the Boz-dagh, or "Grey Mountain," is skirted by the plain of Sardis, watered by the Hermus.

The hills facing Tmolus north of the Alashehr Valley are partly of volcanic

Fig. 100.—Mytilene.

Scale 1 : 490,000.



origin, and one of the plains enclosed by them is the Katakekaumené, or "Burnt Land" of the Greeks. Here the volcanic Kard Devlit, or "Black Inkbottle," which rises to a height of about 500 feet above the Kula plain, is entirely composed of ashes and blackish scoriæ, which crumble beneath the feet. West of it follow two other cones at intervals of 6 or 7 miles, both of which, like the Kara Devlit, have discharged streams of lava towards the Hermus Valley. Of these the westernmost, known as the Kaplan Alan, or "Tiger's Cave," presents a terminal crater about half a mile in circumference. Besides these comparatively modern volcanoes, which are probably of the same age as those of Auvergne, there are several others, which can now be distinguished only in outline, and which are

clothed with the same vegetation as the surrounding districts. Others again, of a still more remote epoch, are dotted over the marble and schistose plateaux.

The Murad-dagh, which forms a western continuation of the Emir-dagh of the central plateau, may be regarded as the nucleus whence diverge the chief ranges and rivers in the north-west of the peninsula. Here the Meander, Hermus, and Thymbrius take their rise, and here the lofty Murad range, which exceeds 6,500 feet in height, merges westwards in the Ak-dagh, or "White Mountain," which has an elevation of 8,120 feet. Farther on this system is continued by the Demirji-dagh, with its southern spurs, one of which is the superb trachytic Kayajik, rising vertically above the surrounding valleys. The Hassan-dagh, by which the main range is continued to the east and south-east, sweeps round towards Mount Sipylos, as if to enclose the Hermus Valley. Its gorges, formerly crossed only by rugged tracks, are now traversed by the railway between Smyrna and Magnesia. Most of the other chains connected with the Demirji generally stretch away in a succession of gently rolling hills towards the sea of Marmora. But Syenitic Madara-dagh, over against Mytelene, consists largely of huge blocks piled up in fantastic shapes, and presenting all the transitions between the solid rock and disintegrated sands. Mytelene itself, which is separated by the Gulf of Edremid from the high seas, also bristles with peaks, amongst which is an "Olympus," whose summit is occasionally covered with snow. This large Anatolian island evidently belongs to two different orographic systems, its west side forming part of the Troad, while the east runs parallel to the shores of Mysia. To this double formation Mytelene is indebted for its peculiar fan-like shape, giving access southwards to circular marine inlets.

Ida and Olympus—North Anatolian Ranges.

The mountains of the Troad have their chief nucleus at its southern extremity, immediately north of the Gulf of Edremid, where rise the wooded heights of the Kaz-dagh, the Ida or Gargara of the ancients. These two names, however, must be applied in their poetic sense to other more central mountains of the Troad. At least from the topmost crest of the Kaz-dagh, 5,880 feet high according to Schmidt, and surrounded by other peaks scarcely less elevated, the plain of Ilion is not visible. Hence from this point Zeus could have been described as contemplating the struggles of Trojan and Greek on the banks of the Scamander. For the present Hellenes Ida is a sacred mountain, as it had been in pagan times. Near the summit are seen the remains of cells and shrines, and on the feast of the prophet Elias the surrounding peasantry spend the night on the peak, in order to kneel in worship as soon as the sun appears above the horizon. Doubtless the ceremony has little changed since the old poets celebrated the glorious crest lit up by the ruddy dawn, and diffusing a divine effulgence over the land.

Ida is still clothed with the magnificent forests to which it owes its name. But on most of the advanced spurs, such as the Kara-dagh and Karali-dagh, nothing now remains except scrub and brushwood. Nevertheless, the upland

pastures have here and there preserved their clumps of pines, nowhere dense enough to arrest the view. Lower down, the Mendereh winds through the Trojan plain, stretching away to the Hellespont, beyond which spreads the glittering sea with its islands—Tenedos, Lemnos, Imbros, Samothrace—supported in the background by the triangular headland of Mount Athos, The last hills of the Ida system, comprised between Besika Bay and the entrance of the Dardanelles, form an isolated barrier skirting the coast, and limited southwards by the mouth of the Scamander, towards the north by the delta of the Mendereh, the Simois of Homer. At this point Tenedos, with its bare hills, forms, with a few other islets less destitute of vegetation, a small archipelago off the Trojan coast.

The south side of the Sea of Marmora, is also skirted by a small orographic system, separated from the southern hills by alluvial and tertiary formations, which mark the direction of an ancient strait flowing between the Euxine and Ægean. The peninsula of Cyzicum, connected by a narrow strip with the mainland, is also commanded by an eminence known as the Kopu-dagh, while the Marmora group, so named from its marble cliffs, consists of upheaved rocks. East of the Propontis is the peninsula lying between the gulfs of Ghemlik and Ismid, which has also its insular mass, whose chief summit, the Samanlu-dagh, rises to a height 2,730 feet, terminating westwards in the imposing headland of Boz-burun. This headland is of volcanic formation, like several other promontories stretching along the coast between the Gulf of Ismid and the Black Sea.

Olympus, whose hazy outlines are visible from Constantinople on the southern horizon, is connected only by irregular spurs with the inland Murad-dagh highlands. It consists of an almost isolated mass of gneiss and granite, interspersed along its slopes with diorite and marble. Although easily ascended, even on horseback, the actual height of the Kechish or central peak is still unknown. But it can scarcely be less than 8,000 feet, thus taking the first rank amongst the mountains of Northern Anatolia.* West of the Galatian Olympus, this is the first that has received the name of Olympus, and amongst the fifteen or twenty other peaks so named this has been chosen by the popular tradition as the chief abode of the gods. Facing Bithynia on the north, Mysia on the south side, it towers in isolated grandeur between these two provinces, commanding a vast horizon from the Euxine waters to the isles of Marmora and the Thracian shores. South-eastwards it is continued by a narrow regular crest, which branches off further on in parallel ridges. Eastwards other less elevated eminences stretch away towards the valley of the Sakaria, which flows in a narrow bed between vertical or steeply inclined walls, rising to a moderate height above the surrounding plateau. The highlands, properly so called, reappear east of the Sakaria and of the steppe region occupying the centre of Anatolia.

The various ranges intersecting the plateau between the Sakaria, Kizil-irmak, and Yeshil-irmak basins, consist mainly of relatively slightly elevated crests, disposed in the direction from south-west to north-east. Few of them exceed

* Height of Olympus, according to Kiepert, 6,280 feet; Petermann, 6,420; Stebnitzkiy, 8,100; Marmont, 7,490; Fritsch, 7,060.

6,000 feet, and several are merely rolling hills covered with pastures, but probably destined one day to receive a large sedentary population. For the soil is naturally fertile, and the atmosphere remarkably pure. Of the ranges in this region, the highest is the Ala-dagh, whose culminating peaks exceed 8,000 feet. It consists of five parallel chains, sloping gently down to the surrounding plateau. The Ilkas-dagh, south of Kastamuni, and the Elma-dagh, south of Angora, also exceed 6,500 feet. West of Sivas a range formed of parallel ridges running south-west and north-east, takes the name of Ak-dagh, or "White Mountains," from its winter snows. Chihacheff assigns a height of 7,400 feet to its loftiest peaks. It is continued north-eastwards by the Yildiz-dagh, or "Star Range," which falls to about 3,000 feet. But farther on the hills again rise, to a considerable altitude, merging at last in the Pontine system. A lofty ridge skirts the coast north of the deep valley of the Lycus, or Ghermili. Sienites and porphyries, here and there underlying sedimentary rocks, are the prevailing formations in these ranges, which are pierced in many places by lava streams. North of Shabin Karahissar, the Kazan-Kaza volcano rises to an elevation of over 8,300 feet. This coast range probably abounds more than any other Anatolian mountains in iron, copper, and argentiferous lead ores. Here, according to the legend, were invented the hammer and anvil.

The Anatolian Water Systems—The Yeshil-irmak, Kizil-irmak and Sakaria.

The Anatolian plateau being roughly inclined towards the north-west, its main drainage necessarily follows the same direction. Thus the running waters of more than half of the peninsula flow to the Euxine, through the basins of the two Irmaks and Sakaria. But there still remain extensive central depressions, where the rainfall is collected in saline lakes. In former times, when the climate was more moist than at present, these now landlocked basins probably discharged their overflow seawards. But the old freshwater lakes have been transformed to salt lagoons by the gradual dessication of the land and the excess of evaporation over the rainfall.

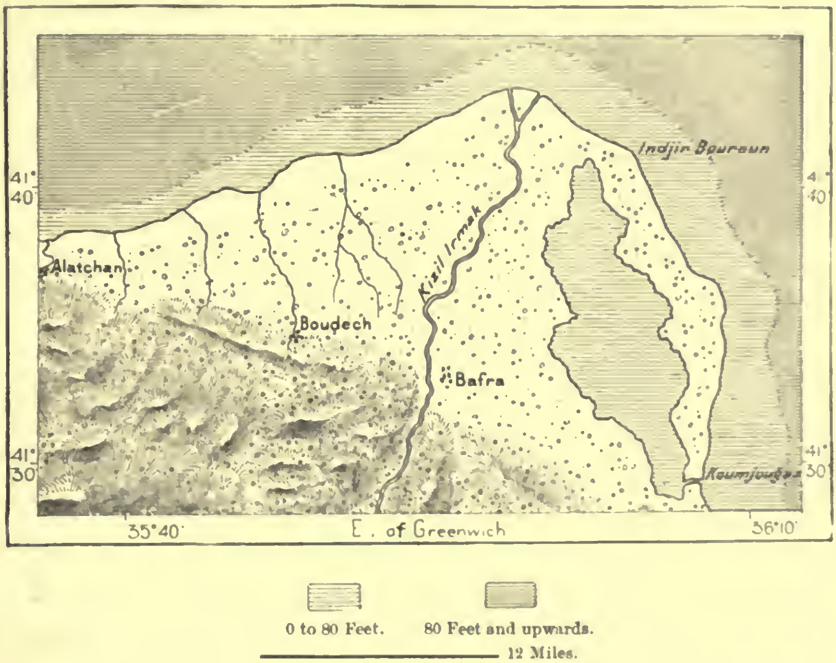
In north-east Anatolia the largest river basin is that of the Yeshil-irmak, the ancient Iris, which receives nearly all its feeders from the western spurs of the Anti-Caucasus. The Tosanli-su, which, owing to its direction, is regarded as the main stream, has its source in the valley of the Kös-dagh, whose southern slope gives rise to the Kizil-irmak, the largest river in Asia Minor. It flows first west-wards, then trends north and south-east, receiving at Amasia the discharge of Lake Ladik-göl, now a small sheet of water, but which in the time of Strabo covered a vast area. Of the two streams, the Lycus, the Kelkit or Ghermili of the Turks, is the most copious, rising far to the east of the Tosanli about the meridian of Trebizond. Below the confluence the main stream receives no more affluents, and after piercing a rocky barrier, by which its course was formerly arrested, it spreads out in an extensive alluvial delta, which has already encroached some hundred square miles on the Euxine.

Immediately east of the Yeshil irmak flows the Termeh, the Thermodon of the Greeks, a far more copious stream than might be expected from the limited extent of its basin. Its upper valley was formerly associated with the legend of the Amazons, a legend which even still survives in the local traditions. One of the ridges pierced by the Termeh is continued westwards beyond the Iris under the name of Mason-dagh, or "Amazon Mountains."

The Kizil-irmak, or "Red River" of the Turks, and Halys of the ancients, roughly describes a vast concentric curve with the Yeshil-irmak, or "Green River." The length of its course between its source in the Kös-dagh and its delta, is at least fivefold the direct distance between these two points. Its upper bed is at times completely dry in summer, and even lower down it is fordable in many places as far

Fig. 101.—Delta of the Kizil-Irmak

Scale 1 : 650,000.



as the neighbourhood of the delta. The excess of evaporation over the rainfall in its basin gives it a brackish taste fully justifying its Greek appellation. In the Sivas plain it traverses beds of pure salt, whence the natives of Western Armenia derive their usual supply. Like the Yeshil, the Red River ramifies at its mouth into a number of branches, which have largely gained on the waters of the Euxine. The old geographers, following the example of Herodotus, often took the Halys as the natural limit of Asia Minor, calling the vast region beyond its delta Trans-halysian Asia. The choice of this boundary is explained by the military importance of three considerable streams—Thermodon, Iris, and Halys—following at short intervals like the moats of a citadel.

Although the longest of all Anatolian rivers, the Kizil-irmak is less copious

than the Sakaria, the Sagaris or Sagarias of the ancients. Like the two Irmaks, the Sakaria pursues a very meandering course of about 360 miles in the normal direction from east to west. On the plains it has frequently shifted its bed, and in the Byzantine annals mention is made of extensive hydraulic works undertaken to regulate its current. Several projects of canalisation have also been recently presented to the Turkish Government, one of which, prepared by French engineers in 1870, proposed to render the river completely navigable throughout the year for 150 miles from its mouth by a system of locks, cuttings, and lateral canals. Pending the execution of these plans, the Sakaria remains unnavigable, except for very light boats and rafts, on which timber and charcoal are floated down for Constantinople. The projected railway schemes have also hitherto remained in abeyance, but will no doubt sooner or later be realised, for the Sakaria route forms an important link in the shortest overland highway between England and India.

The lacustrine region of Central Anatolia seems to have formerly formed part of the Sakaria basin, at least for the greater part of its extent. Here the largest sheet of water is the Tuz-göl, or "Salt Lake," which is at least 60 miles long north-west and south-east, and nowhere less than 3 or 4 miles wide. It covers a total area of over 400 square miles, but in summer its mean depth is probably less than 7 feet. Towards the centre are seen the traces of a dyke over 7 miles long, constructed by a sultan for military purposes, and here the water is nowhere much more than 3 feet deep. During the dry season its outlines could scarcely be recognised but for the plants growing along the shore, beyond which an unbroken deposit of salt stretches for many miles in some directions. In winter the whole depression is flooded, but even then the surface is covered by a saline crust from 2 inches to 6 or 7 feet in thickness, and generally solid enough to support a man on horseback. According to Philipps, the water of the Tuz-göl is heavier and more saline than that of the Dead Sea, containing over thirty-two per cent of salt, with a specific weight of 1·240.

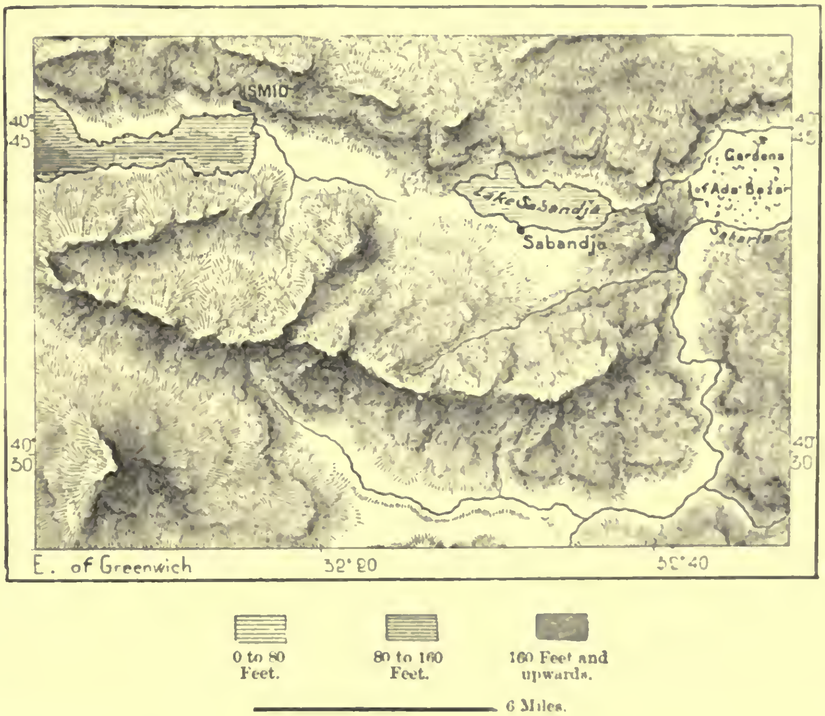
West of the Tuz-göl the plain is studded with numerous ponds, tarns, salt pools, swamps, and rivulets, which evaporate in summer, and which besides salt, often contain sulphates of magnesia and soda. The temporary lakes stretching to the south and west are also charged with bitter magnesia salts, without any admixture of chloride of sodium. Such phenomena are common enough in closed basins, and are due to the different chemical constituents of the soil traversed by the streams. The drier parts of the steppe are clothed with an aromatic herb, which cattle eagerly devour, and which yields a perfumed oil, pronounced by Moltke to be as pleasant as essence of roses.

Beside the steppe lakes, evidently the remains of an older and more extensive basin which drained northwards through the Sakaria, there are other reservoirs, which although now occupying distinct cavities in almost closed cirques, appear to have belonged to the system of seaward drainage. Traces of old communications are indicated at several places by channels and ravines still showing the marks of running water. To the same marine basin of Central Anatolia apparently also belonged the reservoirs scattered over the depression lying between the Emir-dagh

and Sultan-dagh, and which are alternately flooded basins and simple meres surrounded by saline incrustations.

In its lower course, the Sakaria receives the overflow of a lake, which though of small size is very remarkable as the remains apparently of a channel, through which the Euxine communicated with the Ægean before the opening of the Bosphorus farther west. This lake, the Sophon of the ancients, and present Sabanja, stands 100 feet above sea level, and has a depth of over 120 feet. Yet it is a mere remnant of a former inland sea, as shown by the surrounding soil, which consists of fine sedimentary matter, wafted by the slightest breeze into dense clouds of dust. The lake seems even now marked out as the natural port of a navigable strait,

Fig. 102.—Lake of Sabanja.
Scale 1 : 630,000.



which might easily be constructed or restored between the Sea of Marmora and the Euxine by the Gulf of Ismid and the lower course of the Sakaria. Such a project was proposed to Trajan by Pliny the younger, and traces, still visible in his time, attested that the enterprise had already been undertaken by Mithridates, Xerxes, or some other sovereign. It was again resumed at various epochs since the time of Solomon the Magnificent, but always unsuccessfully. According to several careful surveys, the intervening ridge is about 135 feet, so that the relative level of land and sea has been modified at least to this extent since the closing of the Sabanja strait, an event probably coincident with the opening of the Bosphorous. Along the Euxine coast old beaches are still visible at various points and at different

heights up to 100 feet, covered with shells exclusively of the same species as those now inhabiting the surrounding waters. There are few more interesting regions than these shifting straits and isthmuses between Europe and Asia; but their geological history is still but imperfectly known. The regime of the current and counter-current between the Euxine and Sea of Marmora is not even yet accurately determined; nor has it been ascertained with certainty whether the two basins do not present some difference of level. The waters of the Euxine, setting from the shores of European Turkey towards the Bosphorus, are not all able to escape through this narrow outlet. A portion of the stream is thus deflected to the left along the Anatolian seaboard at a mean velocity of nearly 2 miles per hour, and the current is felt as far east as Sinope. At the foot of the Ineboli lighthouse, where it attains a speed of about $2\frac{1}{2}$ miles, the existence of regular tides in the Black Sea were for the first time determined. On the neighbouring shores of the Bosphorus they vary with the winds from 4 to 5 inches. But at Ineboli the tidal wave rushes in the form of a bore for over a mile up the rivulet.

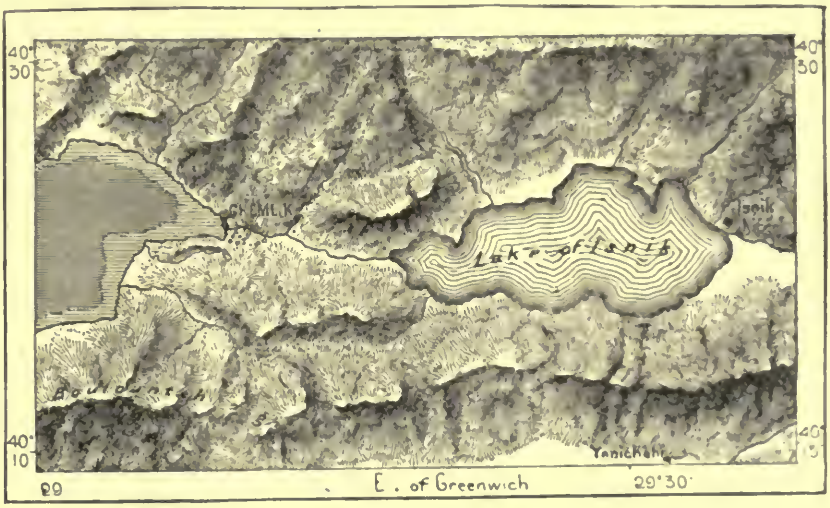
Like that of Sabanja, the Lake of Isnik, or Nicea, is a freshwater basin communicating through an emissary with the sea. Westwards the Gulf of Ghemlik penetrates far inland, as if to effect a junction with the lake, which was itself no doubt at one time a marine inlet. It lies within 7 miles of the coast, and the difference of level is only 100 feet. Towards the southwest another lacustrine basin, which has preserved its Greek name of Apollonia under the form of Abolonta or Abolumia, covers about the same area as the Lake of Nicea, and like it seems to have been much larger down to comparatively modern times. It communicates westwards with the rapid river Susurlu-chai, nearly opposite the confluence of another stream, emissary of Lake Maniyas, the ancient Miletopolites or Aphanites. This basin, which is about the same size as that of Apollonia, also stands at a slight level above the sea. It forms the last western link in a chain of lakes running parallel with the southern shores of the Sea of Marmora, and apparently representing an ancient "Propontis" between the Ægean and the Euxine. Of the four chief lakes in this chain, Apollonia is the most utilised for navigation, the riverain Greek population carrying on a local traffic with small craft which maintain the communications from village to village.

The Granicus, Scamander, Meander, and other Rivers flowing to the Ægean.

West of the Susurlu-chai and of Lake Maniyas, the small basin of the Koja-chaï, the ancient Granicus, is partly fed by the waters of Mount Ida. Like the neighbouring streams, the Koja, which separates the Trojan uplands from the rest of Anatolia, becomes a river properly so called only during the heavy rains and melting of the winter snows. Famous amongst these mountain streams is the Menendereh, immortalised in the Homeric songs, although it is still doubtful whether it is to be identified with the Simois or the Scamander. According to most historians and archæologists, the Mendereh is the Simois, although Schliemann,

the illustrious explorer of the Hissarlik ruins, makes it the Xanthus, in accordance with the etymology of the present name. The aspect of the land shows that the plain of Troy is one of those Anatolian districts that have undergone most change during the historic period. The hills themselves have been but slightly modified by erosions and weathering; but the intervening plain, formerly partly covered with reservoirs, is now dried up. A line of dunes connecting the Eren-koi hills with the Kum-Kaleh headland, has served to retain the alluvia and detritus washed down to the plain by the Mendereh and other streams. These waters are no longer accessible to the smallest craft, and Kalafat, where boats were formerly built, is now an inland agricultural hamlet. At present the alluvia of the Menendereh are borne seawards and carried by the Hellespont far into the Ægean. Formerly the

Fig. 103.—Nicea and Ghemlik.
Scale 1 : 735,000.



0 to 160 Feet. 160 Feet and upwards.

12 Miles.

Bunarbachi, identified by most travellers with the Homeric Scamander, drained to the Menendereh through a series of marshy lagoons. But its waters have been diverted to the sea near Tenedos by means of a cutting which now connects the Bunarbachi basin with Besika Bay. Thus the little rocky headland of Sigæus, with its funeral mounds, has been converted into an island.

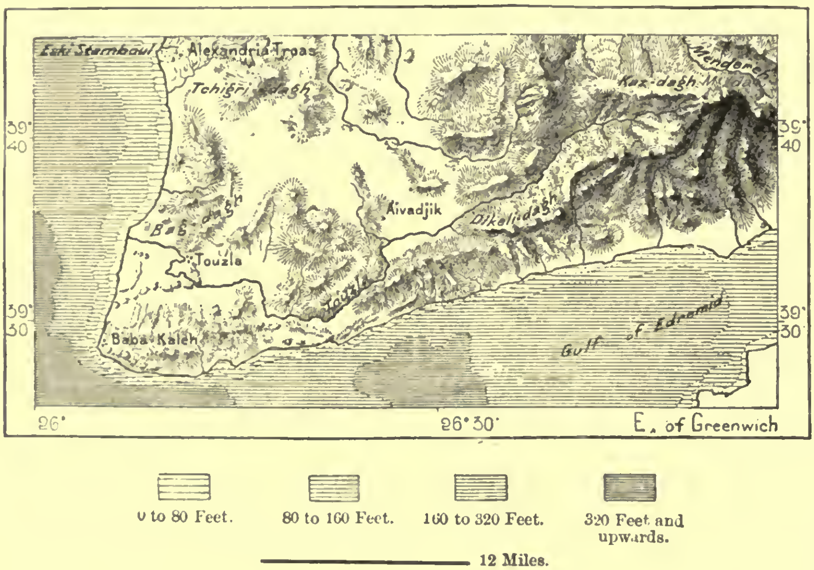
Amongst the torrents or rivulets flowing from Mount Ida and the neighbouring hills to the Ægean, the Tuzla-su, or "Salt Stream," is remarkable for the fantastic form of its valley. After piercing the snowy heights, it runs parallel with the Gulf of Edremid, thus reaching the Ægean north of the Baba-kaleh headland. But instead of flowing directly to the sea, it skirts an intervening rocky barrier for a distance of 60 miles. The white cliffs at the outlet of its valley are streaked in blue, red, and yellow, and disintegrated by a multitude of little saline springs

intersecting the plain in all directions, at a temperature of from 140° to 160° F., and flowing through a common thermal channel to the Tuzla-su. A vast quantity of salt might be derived from this source, which, however, according to Chihacheff, scarcely yields eighteen or twenty tons yearly.

Southwards follow the Madara-chai, Khoja-chai, and Bakyr-chai successively; but here the first really copious stream is the Ghediz-chai, the ancient Hermus, fertiliser of the Lydian plains. Rising near the town of Ghediz, whence its name, it escapes from the hills through a series of gorges down to the old lacustrine plain of Sardis. The brackish little upland lake of Mermereh, north of this plain, is perhaps a remnant of the inland sea which once flooded the Lydian district, and which escaped through the Menemen defile between the Sipylos and the Hassan-dagh. Beyond the gorges the Ghediz, with its abundant sedimentary matter, has

Fig. 104.—The Tuzla-Su Valley.

Scale 1 : 775.000



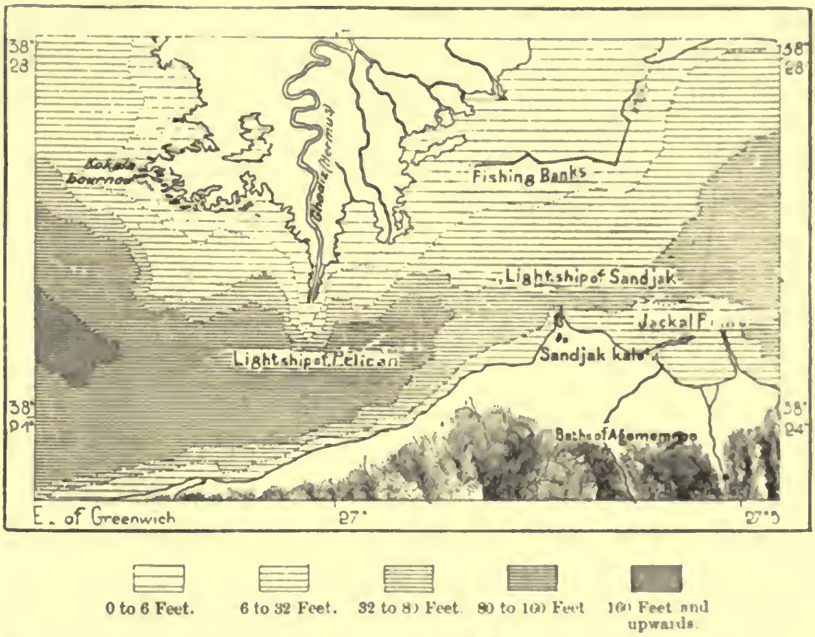
never ceased to encroach on the gulf, gradually filling up all the space, some hundred square miles in extent, stretching south of Menemen between the western promontories of the Sipylos and the Phocæan Hills. Pliny mentions Cape Levke (Leuké) as having thus become attached to the mainland; and this headland, the Tres-tepeh of the Turks, now lies nearly 3 miles inland, being separated from the Gulf of Smyrna by shallow fishing lagoons.

Ramifying into several branches, the Ghediz-chai delta still continues to advance somewhat irregularly seawards. Formerly it spread chiefly towards the west in the direction of the Phocæan Hills; but the mouths of the delta are now extending southwards, in a way that threatens to block the entrance of the port of Smyrna. During the floods the sea is turbid with alluvia for a great distance from the mouth of the river, while farther east the harbour has lost all the limpid

clearness of the Ægean waters. The time may even be calculated when the passage will be entirely closed. Before the chief mouth of the delta there is still a channel over 1 mile wide, with a depth varying from 60 to 120 feet; but eastwards it narrows to a width of about 140 feet between a fortified point on the south, and a sandbank on the north side, where the depth, now about 60 feet, is yearly diminishing by from 8 to 10 feet. The channel has occasionally been suddenly scoured by storms; but after these passing interruptions, the silting process is resumed at a rate that will probably reduce the whole harbour to a mean depth of about 40 feet towards the year 2,000. Then deep sea navigation will become difficult and even impossible, unless meantime the lower Hermus be again diverted

Fig. 105.—Smyrna Channel.

Scale 1 : 155,000.



through its old bed towards Phocæa, so as to carry its alluvia westwards to the outer gulf.

The same silting process, possibly aided by a gradual upheaval of the coast, is characteristic of the other streams flowing farther south to the Ægean. While the port of Smyrna alone is threatened by the Ghediz, the Cayster, the ancient "Swan River" and modern Kuchuk-Mendereh, or "Little Mendereh," has long since choked the harbours of Ephesus, and the Great Meander has converted that of Miletus into an inland lake. Nowhere else are the fluvial deposits encroaching so rapidly on the sea, due regard being had to the insignificant discharge of these streams compared with that of such rivers as the Nile, Rhone, or Po. Thus, although the Little Meander has a course of scarcely more than 75 miles, in a basin only 1,200 square miles in extent, and although its average rainfall is one-fifth less

than that of France, it has sent down sufficient matter to fill the ports of Ephesus and the estuary, which, according to Leo the Deacon, was still open in the twelth century. Hence the coast-line must have advanced nearly 5 miles since that time, a rate of progress which has led to the conclusion that such changes must have been at least accelerated by oscillations of level along the Ionian seaboard.

The Buyuk Mendereh, or "Great Meander," is in any case one of the most copious of Anatolian streams. From source to mouth it has a total length of some 230 miles, while some of its affluents are 60 miles long, and the whole basin, about 9,500 square miles in extent, with a mean discharge of over 7,000 cubic feet per second, judging at least from the average local rainfall. It rises in the lakelet of Hoiran, which lies at an altitude of about 3,000 feet on the plateau. After twice disappearing in the cavities of the limestone formations about the town of Dineïr, it escapes from the hills to an extensive plain, formerly a lacustrine basin, where its waters are concealed by the dense sedge lining its banks for miles. On leaving this plain the Meander, doubled in volume by the Banas-chai, forces its way through narrow gorges down to the magnificent lowlands stretching thence to the coast. During the floods it assumes formidable proportions, eating away its banks, opening new channels, forming or sweeping away islands. In its lower course it is joined by the scarcely less copious Choruk-su, the ancient Lycus, which in the time of Herodotus appears to have flowed at one point through a tunnel over half a mile long, formed by calcareous incrustations from the hundreds of limewater springs fringing both sides of its bed. The tunnel has disappeared, and the Ak-su, or "White River," which had contributed most to its formation, has been deflected farther up. Trees falling into the Ak-su, and even the wheels of mills erected on its banks, soon become petrified.

The hill commanding the Meander and Choruk confluence is flanked for some miles along its base by a regular two-storied terrace, rising about 300 feet above the plain. This terrace, whose sparkling milk-white cascades are visible 18 miles off, has been entirely formed by the deposits of petrifying springs. Most travellers give it the name of Pambuk-Kaleh, or Pambuk-Kalessi, or "Cotton Castle," doubtless from the whitish fluffy looking masses precipitated by the waters. But the local name is Tambuk, which is certainly the Hierapolis of the Greeks. On the upper platform, over half a mile long, there well up numerous and extremely copious thermal springs, all slightly ferruginous and acidulous to the taste, all yielding carbonic acid, and varying in temperature from 98° to 206° F. The ground is covered by thick layers of travertine deposited by these springs, traces of whose shifting beds are everywhere visible. All these phenomena produced a vivid impression on the ancients, and Strabo tells us that the Hierapolis waters became so rapidly solidified that when diverted into new channels these were presently converted into a monolithic block. The cavern which in his time was said to emit deadly carbonic acid vapours, seems to have disappeared.

But the ancients do not mention the real marvel of Tambuk, the rim of whose upper terrace is everywhere scored by sparkling cascades. Even where these are not fully developed or have ceased to flow, the neighbouring walls formed by the

concretions of other streamlets look at a distance like so many rushing waterfalls. Of the six larger stony cataracts, one especially strikes the spectator by its vast size. This is the southern cliff lying immediately below the ruins of the ancient Hierapolis. Altogether these calcareous deposits of Tambuk are amongst the most remarkable formations of the kind in the whole world. Nowhere else does the slow and constant work of dripping or trickling water present more marvellous effects. In a cavity of the upper terrace several springs are collected in one pool over 10 feet deep, studded with broken white marble friezes and shafts, the remains of an ancient portico. A thermal brook, escaping from this lakelet, traverses the plateau, penetrating beneath the vaults of a palace, whose walls it has covered with a coating over 30 feet thick. Farther on it is joined by another thermal rivulet, the united stream falling from stage to stage over the brink of the precipice. Although the actual discharge is probably not much more than twelve gallons per second, seen from below the cascade, blending with its sparkling stony walls, presents the appearance of a mighty river. The illusion is heightened in winter, in spring, and during the summer mornings by the vapours rising above the tepid waters, and forming a misty veil, which seems to half conceal the fall of some tumultuous Niagara. Even when the deception is dissipated by a nearer view, the glint of these glittering incrustations irresistibly suggests the presence of a vast glacier, or river suddenly congealed as it falls. Like the Alpine ice, the travertine of Hierapolis blends with its natural whiteness the lovely tints of a delicate blue, here and there interspersed with the green and rosy hues of marble and alabaster. Thus to the magnificent proportions of this marvellous amphitheatre are added the exquisite details of its dazzling white or softly tinted rocks. In its fall the water gradually cooling spreads in gentle folds, the last of which is precipitated as a snowy border. Each successive stage is thus fashioned like a rounded bowl, below which follow other "fonts" with polished rim, the water still falling from step to step of these "Neptunian stairs." But in its course it everywhere flings an embroidered mantle of wavy pattern over the rocky surface of the cliff, leaving no spot unarrayed with sculptured arabesques.

Below the confluence of the petrifying waters from Tambuk and neighbouring heights, the Meander continues its course across the broad plain, where it describes those peculiar curves which are known by its name. At the same time these "meanderings," although remarkable enough, are far inferior to those of some other rivers, such as the Seine, Lot, Forth, and Mississippi. Its windings are on the whole of a local character, without any of those bold sweeps, by which the Kizil-irmak and Sakaria are distinguished. To these might, with far more justice, be applied the language of the Greek historian, who spoke of the Meander as on its course flowing back towards its source.

On the other hand the Meander is specially noteworthy for its extraordinary encroachments seawards, which during the last twenty three centuries, have been exceeded by no other river of the same volume. To explain the phenomenon recourse has naturally been had to the usual hypothesis of upheaval, which however in this case has not yet been determined by any direct observations. Of the old Gulf

of Latmos, on which stood the maritime city of Miletus, and which stretched

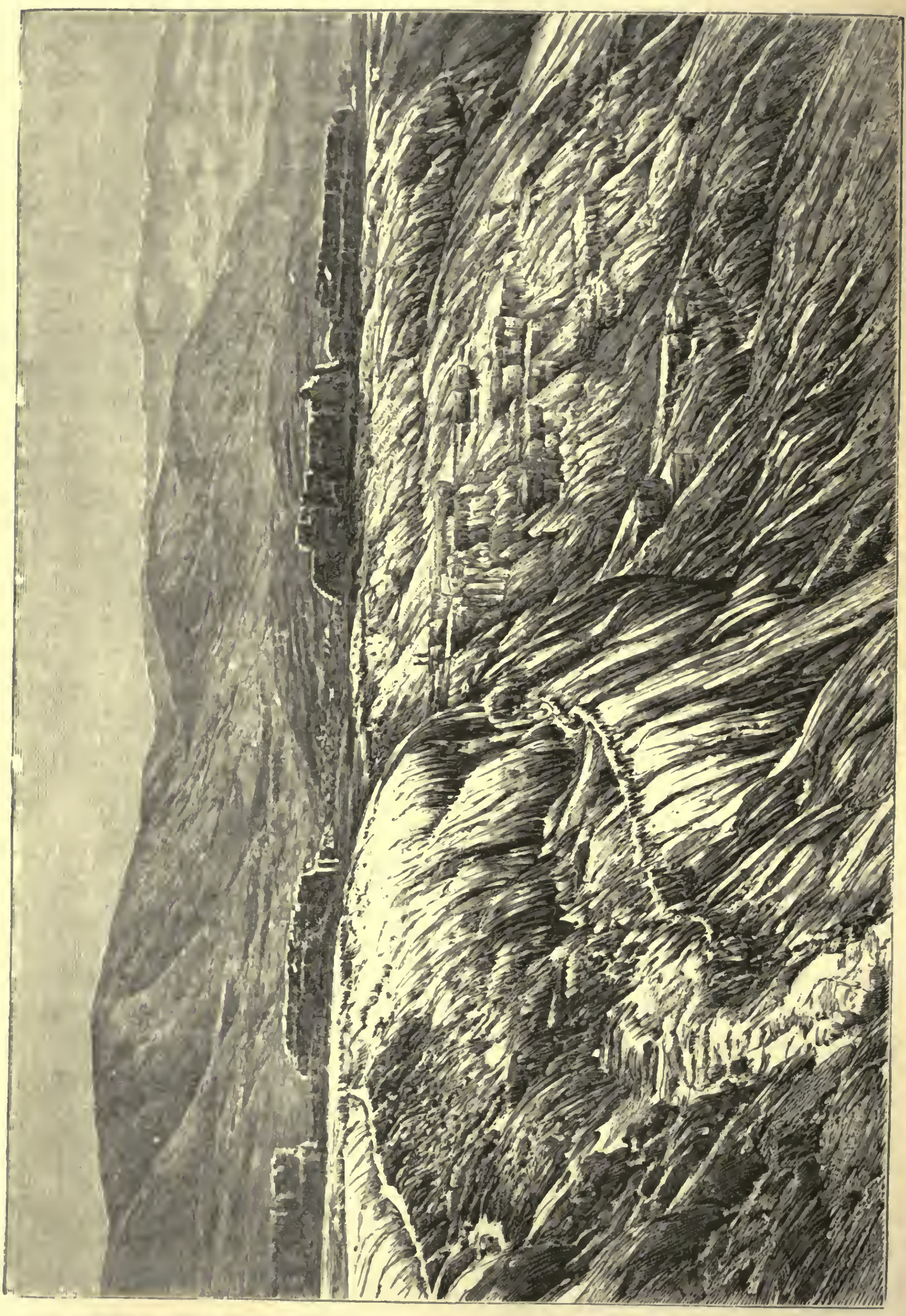


Fig. 106.—Falls of Pambuk-Kaleh, or Tambuk.

northwards to the foot of the hill crowned by the temple of Priene, nothing remains except the small reservoir of lake Kapikeren Denizi or Akis-chai, whose

west side now lies over 10 miles in a straight line from the coast. The former island of Ladé, west of Miletus and north of the present course of the Meander, is now a mere protuberance in the midst of the inland marshes. The space thus gained on the sea in two thousand three hundred years, may be estimated at 130 square miles, giving a mean yearly advance of about 40 feet. Assuming that in this region of comparatively recent alluvial formation the sea itself was only 60 or 70 feet deep, and allowing a mean rise of some 30 feet through the alluvia of the Meander, the total quantity of matter deposited in this period would be about 350,000,000,000 cubic feet, or 17,500 cubic feet daily. This is certainly no extraordinary proportion, for even the Brenta, whose discharge has been most carefully studied, with an inferior volume deposits eight times as much in the Chioggia lagoon. But the deposits of the Meander probably greatly exceed the assumed ratio, for according to Chihacheff, lake Akis-chai now stands at an elevation of 96 feet above sea level. But however this be, the Meander delta is one of those in which are combined all the elements of transformation—gulfs filled in, islands attached to the land, cities swallowed up in the sands. From the peaks of the Samsun-dagh overlooking the plain, a varied prospect is commanded of all these secular changes, a white streak at the foot of a green hill in the distance marking the site of Palatia, all that now remains of the once-famous Miletus.

Lacustrine Basins and Rivers draining to the Mediterranean—The Seihun and Jihun.

On the Anatolian slope draining southwards, the first lake which discharges to the Mediterranean appears, like the Akis-chai, to form part of a marine inlet closed by recent alluvia, and gradually raised to its present level of 96 feet above the sea. This is the Köjez-liman, or Caunus of the ancients, which even in the time of Strabo was already cut off from the coast. Hence at least eighteen or nineteen centuries have elapsed since the old gulf has become a lake. But the coast-line has changed, for the town, which then stood close to the sea, now lies 5 miles inland. Another proof of change is a sarcophagus, which, after having been submerged to a third of its height, now stands once more on dry land. This Lycian coast is the only part of the Anatolian seaboard where corals (*cladocora cæspitosa*) build extensive reefs. Red coral also grows in the shallows, but its branches are too small to repay the trouble of fishing it.

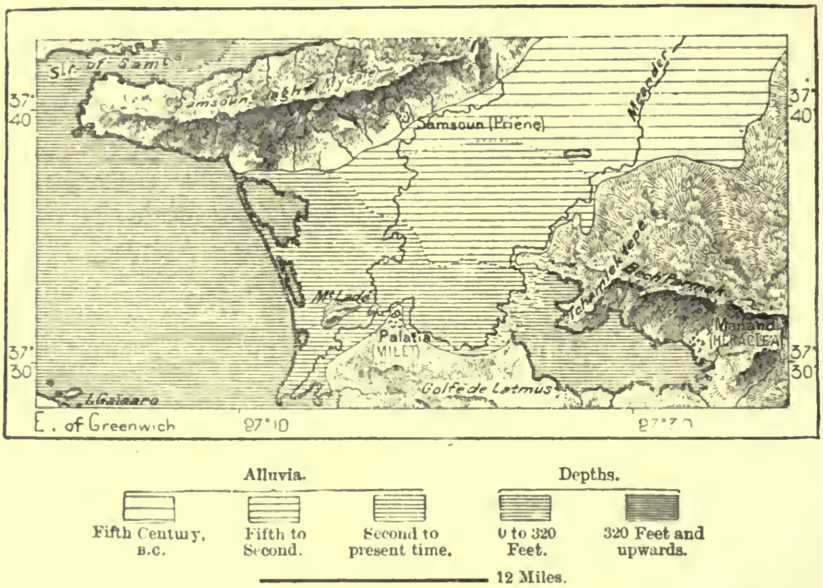
On the south-west coast of Lycia, the harbour of Patara has also been transformed to a lake, or rather a morass. But a far more important change has taken place in Pamphylia, on the north side of the gulf of Adalia. Here the extensive lake of Cypria, of which Strabo speaks, has been replaced by marshy and scrubby tracts, and lagoons separated from the sea by a strip of yellow sand. Chihacheff estimates at about 160 square miles the surface of the Pamphylian lacustrine basin, which now forms part of the mainland. Besides the fluvial alluvia, this reservoir has been filled in by the deposits from innumerable calcareous springs, like those of Tambuk. Near Adalia the face of the cliffs has evidently advanced at least

1,000 feet, thanks to these accumulated incrustations. The streams that have covered the land with layers of travertine are incessantly shifting their beds, sometimes even disappearing altogether under natural galleries in the porous soil. Thus the hydrographic system becomes modified from age to age, so that it is no longer possible to reconcile the old accounts with the present conditions. The Cataracts spoken of by Strabo as a large river rushing impetuously over a precipitous rock has ceased to exist, having probably ramified into a number of surface or subterranean branches.

The Ak-su, or "White River," which furrows the western plains of this stony basin, rises in the hills to the west of Lake Egherdir, which may possibly communicate with it through an underground channel. Although less extensive than the great Lycaonian Salt Lake, that of Eghidir is much deeper, and probably the

Fig. 107.—Plains of the Lower Meander.

Scale 1 : 550,000.



most voluminous in Asia Minor. It is divided by a transverse ridge into two sections, the southernmost of which resembles an Alpine lake. Encircled by steep wooded escarpments, and studded with islets where the white hamlets glitter amid clusters of poplars, it presents at every step an endless change of scenery. Very different are the two reservoirs of Buldar and Churuk-su, lying farther west, and with their low monotonous beaches presenting for the most part the aspect of dreary marshes or lagoons.

Amongst the closed basins of Asia Minor must also be included the Beishehr-göl, or Kereli, the Karalitis of the Greeks, which, although smaller in extent, probably contains a larger volume than the great Salt Lake. Most of the numerous torrents flowing from the neighbouring hills disappear in the crevasses of the soil before reaching this reservoir, which is fed chiefly by springs welling up in the

lacustrine cavity itself, or flowing from fissures in the encircling rocks. Mingling with the unwholesome waters of the lake, these springs thus become lost to the riverain populations, who are obliged to sink wells in the immediate neighbourhood of this fresh-water but unpalatable reservoir.

The Beishehr-göl, which according to Chihacheff stands 3,800 feet above sea level, discharges its overflow through an emissary flowing from its southern extremity to a depression lying some 50 feet lower down. This depression was till

Fig. 108.—Lake of Egherdir.

Scale 1 : 750,000.

12 Miles.

recently flooded by lake Soghlu, which had a mean depth of 20 to 25 feet, with an area of about 70 square miles, and a volume of over 35 billions cubic feet. Yet this vast body of water disappeared towards the middle of the present century, having probably forced its way through some hitherto obstructed underground gallery seawards. The alluvial tracts developed in the lacustrine basin have since been converted into productive lands by the local peasantry, who, according to a traditional custom, became proprietors of the reclaimed soil by yielding half of the

first and a tenth of subsequent crops to the Government. The other small lakes of Lycia, in the Elmalu basin and neighbouring plains, also discharge their overflow through subterranean channels excavated in the limestone rocks. The Avlan-Oghlu, south of Elmalu, is fed by a rapid stream some 30 feet broad and 6 or 7 deep, and its emissary, after plunging into a deep crevasse, reappears in the form of copious springs near the village of Phineka, not far from the coast. According to a tradition mentioned by Hamilton, the valley now flooded by Lake Eghedir was dry land eight hundred years ago, when the obstruction of some subterranean passage caused the waters to accumulate in the depression.

East of this depression some other now closed lacustrine basins appear to have formerly drained to the Mediterranean. Such is the Kara-bunar, or "Black Fountain," which is encircled by volcanic cones and lava streams. South of it the shallow lagoon of Eregli stretches for some 60 miles parallel with the northern base of the Bulgar-dagh. This extensive basin is studded with reservoirs, some always saline, others filled in winter by small freshwater affluents, but again slightly brackish in summer. Eregli still drains to the Mediterranean through a rivulet, which in spring is swollen to considerable proportions by the melting snows. At this season both Eregli and Kara-bunar, as well as all the low-lying marshy tracts, are converted into a vast inland sea 60 miles broad, and stretching westwards to the gates of Konieh.

In classic times both the Castros, or modern Ak-su, and the neighbouring Eurymedon, or Köpro-su, were navigable at their mouth. Now they are closed to small craft; while the Malas, or Manavgat, is navigable by sailing vessels, although not spoken of by the old writers as accessible to shipping. On the other hand, the Calycadnus (Ermerek, or Gök-su) although the most copious coast stream west of Cilicia Campestris, is too rapid to have ever been navigable. Farther east the Tarsus-chai, or "River of Tarsus," in Cilicia proper, is the famous Cydnus of the ancients. At its source, one of the most copious in Asia Minor. countless rivulets springing from a crevassed rock are collected in a common basin, whence the Cydnus descends through wild gorges and romantic cascades down to the fertile plain of Tarsus. Farther on it winds through a series of swamps, remnants of an old lake, to the coast a little west of the Seihun. Like so many other Anatolian streams, it has frequently shifted its bed, and since the end of the sixteenth century has been deflected to the east of Tarsus, which formerly stood on its banks.

But the pre-eminently wandering streams are the East Cilician Sarus and Pyramus, the Seihun (Sihun, Sihan, Saran) and Jihun (Jihan) of the Turks and Arabs. The Sarus, which is the longest and most copious, flows from the highlands north-east of Mount Argæus, and collects all the streams traversing the parallel depressions of the Anti-Taurus. On the west it is joined by other torrents which, descending from the central plateau, pierce the Taurus through gorges even more inaccessible than the Cilician Gates. The Pyramus rises in the upland region, forming the water-parting between its basin and that of the Euphrates. But hitherto Strabo is the only traveller who describes its source, and he also speaks in remarkably precise terms of the gorge through which it escapes to the plains.

"The prominences of one wall correspond exactly with the depressions of the other, so that if brought together they would fit into each other. Towards the centre of the gorge the fissure is so contracted that a dog or a hare could clear it at a bound." * In its lower course the Pyramus collects all the torrents from the hilly district stretching east of the Anti-Taurus; but these uplands, being less exposed to the rain-bearing winds than those of west Cilicia, receive a smaller quantity of water. Hence, notwithstanding the greater extent of its basin, the Jihun is much inferior in volume to the Seihun. According to the engineers who have surveyed the land for the projected railway between Mersina and Adana, its discharge is scarcely

Fig. 109.—Mouths of the Seihun and Jihun.

Scale 1 : 1,280,000.

more than a third of that of the western stream.† Nevertheless it is navigable in its lower course for over 60 miles from its mouth.

Throughout the historic period both rivers have never ceased to wander over the alluvial plains which they have developed west of the Gulf of Alexandretta. At present their mouths are separated by a space of 43 miles as the bird flies. But from the old records it appears that their currents were often intermingled in a common estuary. During the last twenty-three centuries as many as seven great changes have taken place. Three times they have flowed together in a common

* Book XII., chap. 4.

† The Cilician rivers:—

	Length (miles).	Area of Basin (square miles).	Mean discharge per second (cubic feet).
Cydnus (Tarsus-chai)	80	560	700
Sarus (Seihun)	270	9,000	8,750
Pyramus (Jihun)	270	9,650	3,300

channel, four times independently to the sea; and even now a slight lateral cutting would suffice again to unite them. During these shiftings over the plain, they have continued to advance with their alluvia incessantly seawards. The Chukurova plain, and most of the tract stretching for over 60 miles between Tarsus and Sis, along the east foot of the Taurus, are their creation. The Kara-tash, or "Black-rock" headland, which serves as a southern barrier to the sedimentary matter washed down from the interior, is an old island, which has thus become connected with the mainland. "In the same way," says an oracle quoted by Strabo, "the time will come when the silver waters of the Pyramus will reach the sacred shores of Cyprus." The muddy tracts about both mouths are still a sort of debatable territory between land and sea. Flora and fauna suggest the recent ascendency of the marine waters, which teem with fish, and which are frequented by myriads of aquatic birds, such as the pelican, swan, goose, and duck. The surrounding sands are also the resort of turtles of gigantic size.

Climate, Flora, and Fauna.

Regarded as a whole, Asia Minor is colder than the European peninsulas under the same latitude, and is subject to greater extremes of temperature. The contrast is due to their relative positions, Spain, Italy, France, and Greece being protected from the polar winds by the Pyrenees, Alps, and Balkans, whereas Anatolia is partly exposed to these currents sweeping unimpeded across the Russian steppes and the Euxine. The section of the Anatolian seaboard washed by the Euxine waters itself supplies a striking example of the climatic effects produced by sheltering mountain-ranges. Thus the western coast zone, comprised between Constantinople and Sinope, is exposed to keen winter blasts and sultry summer heats, while farther east this "Byzantine" climate becomes continually modified towards the north-east, where the lofty barrier of the Caucasus intercepts the arctic winds blowing towards Anatolia. Here the extremes of annual temperature are less marked, and plants which avoid the bleak west coast flourish on the banks of the more sheltered eastern streams. The olive and orange begin to be met in the neighbourhood of towns and villages, while the hill-sides are clothed with magnificent pine forests. According to Koch, the Choruk Valley is the original home of the *pinea*, so characteristic of the Mediterranean botanical zone.

The western shores of Asia Minor, washed by the Ægean, are intersected by isothermal lines slightly divergent from the parallels of latitude. Here the mean temperature is somewhat lower than on the opposite coast of Greece, and the climatic changes are also generally more abrupt and irregular. The normal direction of the winds is at the same time endlessly modified by the islands fringing the seaboard, and by the numerous indentations along the Ionian coast. Every headland, every channel, so to say, has its special atmospheric currents, while at the entrance of the marine inlets a struggle takes place between the winds of different temperature sweeping down from the interior and blowing inland from

the sea. The sudden gusts and squalls due to this cause render certain waters absolutely unnavigable in winter, while the vicissitudes of temperature prevent the vegetation from assuming a sub-tropical character. The chamærops palm and date do not grow spontaneously in west Anatolia, and clusters of palms are met on the coast no farther north than Patmos, hence called Palmosa.

Being well sheltered by the various sections of the Taurus, the southern zone of Asia Minor naturally enjoys a far warmer climate than other parts of the peninsula. Within an equal distance there are few regions presenting a greater difference of mean temperature than the coasts of Tarsus and Sinope. On the Cilician coast the pleasantest season comprises the last two months of the year, separated from the summer heats by the so-called *kassim*, a short autumnal interval which usually lasts about eight days. During this period the atmosphere becomes cleansed from all impurities by violent storms accompanied by heavy downpours and hail, and the inhabitants are now able to descend from their summer encampments down to the plains.

The upland valleys and plateaux of the interior offer the greatest diversity of climate, according to the altitude and aspect of the land, and the thousand contrasts presented by its relief. But a common feature of the whole region comprised within the encircling ranges is its scanty rainfall. Little moisture is brought to the Anatolian plateaux by the clouds, while the coastlands themselves receive less rain than western Europe. Although Asia Minor has an area about equal to that of France, the collective discharge of all its rivers can scarcely be estimated at more than 70,000 cubic feet per second, or about one-third of the united volume of the French streams. Contrasted with the Pontine region, which enjoys a considerable rainfall during the summer months, the peninsular region belongs to the sub-tropical zone, which is marked by comparatively dry summers. Thus even at Smyrna, notwithstanding its exposure to the moist sea-breezes, the fall during the months of June, July, and August, is only two inches, or less than the fifteenth part of the average annual discharge. But in certain inland districts the blue sky remains at times unflecked by a single cloud for six or seven months together. While the coast climate may on the whole be compared with that of southern France, the inland plateaux present meteorological conditions analogous to those of the Turkestan steppes.*

In Anatolia malaria has long been endemic. In shifting their beds all the rivers have strewn the plains with meres and stagnant waters, while so many swamps have been formed by inundations or the retreat of the sea that large tracts on the plains and uplands are constantly wrapped in a pestiferous atmosphere. There can be no doubt that since the flourishing period of Ionian culture the climate has greatly changed for the worse. The deterioration is attested by the ruins of ancient cities, such as Miletus, lying in districts now no longer inhabitable. There was a time when the rivers were confined to their beds, and when the vapours were arrested by the trees fringing their banks. But so ruthless has been

* Mean probable temperature of Asia Minor: winter, 40° F.; summer, 72° F.; average, 54° F. Climate of Smyrna: extremes, 40°—103° F.; mean, 65° F.; rainfall, 24 inches.

the destruction of timber in the greater part of the peninsula, that the contaminated air of the plains and valleys is freely wafted over the uplands. The natives show great skill in selecting the sites of their summer camping-grounds amongst the hills, where they are sheltered by crests or headlands from the effluvia of the low-lying marshy lands. In some districts, the villages on the plains are completely abandoned during the hot season, when officials, peasants, thieves, and mendicants migrate bodily to the upland *yailas* or encampments. In the open districts these are composed of tents or stone cabins; in the wooded regions of north Anatolia, of log-huts, like the Russian *izbas*. Several of these temporary villages, standing mostly on the ruins of old towns, are important markets, visited by traders from the coast for the purchase of butter, cheese, cattle, and other agricultural produce.

On the inland plateaux, the scanty vegetation flourishes chiefly in the spring. It presents a marked contrast to the varied flora of the surrounding coastlands, where are successively represented all the botanical zones of the neighbouring lands. Thus the rich vegetation of the Pontus forms a transition to that of Mingrelia, while in the Troad are found all the plants of Macedonia and Thrace, side by side with many Asiatic types. The two Ionias of Anatolia and Europe have in the same way exchanged their characteristic species across the islands of the Ægean Sea, while in Cilicia many Syrian and even Egyptian specimens have become acclimatised. Thus in the history of its flora, as well as in that of its inhabitants, the peninsula forms a land of transition between the three continents of Europe, Asia, and Africa. The Mediterranean vegetation is represented chiefly by evergreen shrubs, such as the laurel, arbutus, and myrtle, which on the slopes of the Anatolian hills acquire an extraordinary development. The oak also is here found in greater variety than in any other part of the world, offering as many as fifty-two species altogether, of which twenty-six occur nowhere else.

The most extensive Anatolian forest is the Agach-deniz, or "Sea of Trees," which covers the Boli Hills to the east of the Sakaria Valley. All the northern slopes of the ranges running parallel with the Euxine are richly wooded, while forest tracts are also met in the intervening valleys and river gorges The Agach-deniz supplies timber for building purposes and masts for the Turkish navy; but in general, forestry is still in a rudimentary state. In the inland districts lying off the main routes little use is made of the timber except for fuel, and in Caria this is often obtained by the destructive process of firing the woodlands.

The terraced disposition of the vegetable zone on the slopes of the encircling ranges is nowhere better seen than along the southern face of the Cilician Taurus. The subtropical belt of palm-groves and garden-plots enclosed by hedges of aloes leads to the caduceous forest timber clothing the lower hills. Farther up come the conifers—at first the sombre pine and many species of juniper, then Cilician spruce and cedars. Nowhere else in Anatolia or Syria, not even on the Lebanon itself, are to be found such magnificent cedar-groves as those which girdle the Bulgar-dagh escarpments to an altitude of 6,000 feet and upwards. Here grow several millions of these glorious evergreens, disposed in clusters towering above the pines, firs, and

junipers. But here also the fires kindled by the improvident natives, often wrap the hill-sides in a sheet of flame, destroying thousands of trees in a few hours. Beyond the forest zone follows the brushwood corresponding to the upland pastures of Alpine Europe. On the Cilician Taurus grassy slopes are rare, except along the line of running waters, and to the very foot of the arid or snow-flecked crags the ground is overgrown with woody plants and lovely evergreen shrubs. At an elevation where the European highlands present nothing but monotonous gray surfaces, the heights are carpeted with stretches of bright-coloured flowers, imparting to these silent uplands a diversity of aspect of which the western Alps can give no idea. The north-eastern Pontine ranges present a much greater resemblance with those of Central Europe, but they are far more diversified, some of the pastures yielding as many as two hundred species of Alpine plants.

The presence of foreign varieties has been found associated with the settlements of immigrants from distant lands. Thus amid the ruins of strongholds erected by the Genoese, or the Knights of Rhodes, along the headlands and islands of the southern seaboard, flourish the soapwort and other European plants, sprung from those brought hither by the western settlers some six or seven hundred years ago. Garden-plots and orchards also occur, where according to the local tradition, the walnut, apple, cherry, and other fruit-trees, were planted by the Genoese. On the other hand, Europe has during recent times been indebted to Anatolia for a far greater number of specimens. During the sixteenth century the western botanic gardens were little more than nursery-grounds, for acclimatising the evergreen oak, the agnus castus, eastern juniper, white and black mulberry, viburnum tinus, sumach, and other Levantine varieties.

Little effort has hitherto been made to repair former waste by fresh plantations. The attempts made in this direction have hitherto been chiefly limited to the few trees that have, so to say, become the inseparable companions of man—the plantain, associated with his repose, his prayers, his pastimes, and whole domestic life; and the cypress, which watches over his grave. Nowhere else are these plants more venerated than in Anatolia, where they are almost regarded as sacred objects of worship.

The wholesale destruction of timber has been followed by the disappearance of numerous animal species. Thus the lion, which survived down to the time of the Crusades, is now no longer met, except, perhaps, in the more inaccessible gorges of the Lycian Taurus. Here also the Turks speak of the presence of another large feline variety, to which they give the name of *kaplan*, and which may perhaps be a leopard or a panther, like the variety that still infests the Tmolus highlands. Nor is the hyena completely extirpated, and the night is still everywhere alive with the howlings of the jackals, with which the village pariah dogs keep concert. In the eastern districts the jackal is rarer than in the centre and on the Ionian coast, and it has been partly replaced by the brown and the black wolf. The fox is also less frequent than in southern Europe, and the carnivora are altogether mainly represented by the various species of half-savage dogs that prowl about the streets of all the large towns. They are rarely if ever attacked by hydrophobia, although

in the neighbourhood of Smyrna a few cases are reported of deaths following the bite of mad dogs, wolves and jackals. Against this malady the peasantry use a decoction of bitter roots.

The larger European game is also found in Anatolia, where the wild-boar is very common in some districts. The deer and roebuck are met in herds, and the gazelle, unknown in Europe, frequents the lowland plains of Cilicia, while other species of antelope probably inhabit the plateaux. The ægagra, or wild-goat, still survives in the Cilician Taurus and the Anti-Taurus, near the regions where the goat appears as a domestic animal in ancient times. So striking is the resemblance between the two in size, outward form, and shape of the horns, that it is probable the tame variety has sprung from the wild stock. The upland steppes are also frequented by the wild-sheep, a species of mufflon supposed to be the prototype of the European sheep. Thus Asia Minor, the original home of so many vegetable species, would appear to have also yielded two of our most valued domestic animals. On the other hand, it may be doubted whether the Angora goat, so remarkable for the delicacy of its silken, glossy down, is of Anatolian origin. It is mentioned by none of the old writers, who nevertheless describe all the sheep whose wool was used in the manufacture of fine woven fabrics. Hence the introduction of the Angora goat is attributed by Chihacheff to the Turkish immigrants in the eleventh or twelfth centuries. This writer is inclined to trace these tribes and their flocks back to the valley of the Bukhtarma, a tributary of the Irtish, in the Altai Mountains. Here is also found a species of cat, more remarkable even than that of Angora, distinguished like the native goat for its silky fleece, and apparently indicating analogous climatic conditions. But however this be, the Angora goat is at present limited to a district about 16,000 square miles in extent, and even here it flourishes only on the plateaux and in the valleys lying between the altitudes of 2,000 and 5,000 feet above the sea. The flocks number altogether from 400,000 to 500,000 goats, which are extremely difficult to acclimatise elsewhere, the least change of locality causing a corresponding deterioration in the quality of the fleece. Of the ovine family, the most ordinary variety is the *karamanli*, or fat-tailed sheep, which prevails also in Syria, on the Asiatic steppes, and even in Southern Russia. The open plateaux and steppes are the proper domain of the sheep, the goat being confined to the escarpments of the encircling ranges. The steppes themselves are everywhere undermined by the galleries of the burrowing jerboa.

Horned cattle were never very numerous in Asia Minor, although the south-western regions are said to be frequented by a few zebus, with a hump and short movable horns, like those of the Indian variety. But the most common bovine species is the buffalo, which is everywhere found along the river banks and on the marshy lands fringing the peninsula. It is even said to roam wild, or else to have lapsed into the savage state, in the swampy tracts formed by the shifting beds of the Seihun and Jihun, and perhaps in some other districts. The only variety of camel is the one-humped species, which is utilised as a pack animal, bearing loads of 250 lbs. even over the mountain passes and escarpments. The caravans, consisting of from seven to nine camels tied together by a string, are usually headed by a

small ass, whose rider's legs almost touch the ground. The Anatolian camel nowhere betrays that antipathy for the equine species which it manifests elsewhere; it associates peaceably with the horse, and has even been seen yoked together with the ass.

The immigration of the camel, probably dating from the twelfth century, is one of the most striking signs of the territorial and political changes that have taken place in Asia Minor. For this animal symbolises the substitution of Oriental culture for the civilisation of the Mediterranean races. Even the present race of Anatolian horses seems to be mostly a cross on eastern stock. Like the Turkoman variety, it has long legs and a comparatively large head, while the tail resembles that of the Persian breed. It is an active, hardy animal, distinguished, especially in the eastern provinces, for its graceful form, but nowhere very numerous. As a beast of burden it yields not only to the camel, but also to the ass, the latter a small debased variety far inferior to the superb donkeys of Syria and Egypt, and to the wild species, a few specimens of which are said still to survive in the wooded districts of Eastern Anatolia. The mule, said by a tradition recorded in the Iliad to have been first bred in the peninsula, is still employed by the Anatolians, and preferred even to the horse, both for mounting and as a pack animal.

One of the most characteristic features of the Anatolian landscape is the stork, which in some villages is more numerous than the people themselves. At the time of the yearly migrations to the winter quarters in Egypt, they collect in flocks of 25,000 or 30,000 on the borders of the marshy tracts, where they take wing for the flight across the Mediterranean. Like the crows, magpies, and swallows, they prove valued allies to the husbandman when the locusts settle in vast multitudes on the land. But a still more welcome friend is the *smarmar* (*turdus roseus*), a pink thrush with black wings, which falls furiously on the destructive insects, killing them not only for food, but for the mere pleasure of exterminating them. On one occasion the French engineer, M. Amat, saw the inhabitants of a whole village coming out, voluntarily giving up their houses to these carnivorous birds during the breeding season.

Inhabitants of Asia Minor.

The inhabitants of Asia Minor are of very diverse origin. Forming the western extremity of the continent, the peninsula became the natural converging point of all the warlike, nomad, or trading peoples migrating westwards. The southern districts were formerly occupied by Semitic tribes, whose speech seems to have prevailed even in the interior. In the south-west they appear to have become intermingled with a dark race, possibly Kushites. In the eastern provinces the chief ethnical elements were allied to the Iranians, and spoke dialects akin to the Zend, while others represented those immigrants from the North collectively grouped as "Turanians." In the west opposite streams of migration poured in across the Bosphorus and Hellespont. Here the Thracians maintained the com-

mercial and social relations between the European and Asiatic lands encircling the Propontis, while a constant intercourse was kept up by the Hellenes between the opposite shores of the Ægean Sea. Numerous contingents arrived even from the remotest parts of Europe, amongst them the Gauls (Galatians), who for centuries maintained a separate national existence in Western Asia. But at no period did the peninsula belong to a single homogeneous people, one in speech and culture. Ionians, Leleges, Carians, Phrygians, Paphlagonians, Lycians, and Cilicians, one and all sought each to preserve their own autonomy. Many isolated cities, after securing their individual independence, rose to power and splendour; but no political unity was ever achieved by the confederation of these places. Such uniformity as finally existed was the result rather of foreign conquests, and was effected by reducing the inhabitants to a state of political thraldom.

In this vast ethnical crucible most of the old nationalities have lost their very names, and the traditions of their racial origin. Where are now the Chalybes, who taught their neighbours the art of smelting and forging iron? Where are the Galatians, brethren of the Western Gauls, who gave their name to one of the great Anatolian provinces? These, in common with most of the peoples originally occupying the inland plateaux, have become gradually fused with the surrounding populations. The Greeks in the west, the Kurds and Armenians in the east, are the only communities that can trace their origin back to the dawn of history. And even amongst those calling themselves Greeks there are many belonging to the older stocks, although now assimilated in speech and religion to the dominant race on the Ionian seaboard.

The Yuruks and Turks.

In the interior the bulk of the people are now of Turki stock. On these plateaux with their saline lakes the immigrants from the Aral and Balkash steppes found a new and congenial home, where they could continue to lead the same pastoral life as heretofore. Amongst these intruders there are many whose social usages have undergone little change since their arrival, living witnesses of a general culture that has ceased to exist in the regions of the globe regarded as civilised. Thus the Yuruks, sprung from the earliest Turki immigrant tribes, and belonging to the horde of the "Black Sheep," which also included the Seljucides, are still nomads, migrating with their flocks twice a year between their summer and winter camping-grounds. Some possess real houses, like the civilised Turks, but most of them stiil dwell in black goat-hair tents or huts made of branches, approached on all fours, and nearly always full of smoke. The Yuruks are Mohammedans in name only, and their women go unveiled, even raising their heads when appealed to by the passing wayfarer for milk or water. The cabins are usually disposed in a circle with an opening towards the open space, where the tribal interests are discussed in common. Each encampment forms a world apart, which neither invites the stranger nor yet refuses hospitality when asked.* The Yuruk tribes scattered over Asia Minor are reckoned by the hundred; in the province of Brussa alone there are over thirty, subdivided into clans without any

geographical cohesion. They are commonly spoken of under the generic name of "Turcomans," a somewhat vague term, here applied indifferently to nomad shepherds of all races, and not necessarily implying identity of origin with the Central Asiatic Turkomans. Nevertheless several writers draw a distinction between Yuruk and Turcoman, regarding the former as tent-dwellers without fixed abode,

Fig. 110.—Villages of various Nationalities in the Dardanelles District.
Scale 1 : 300,000.

6 Miles.

the latter as already half settled, chiefly on the central plateaux and eastern uplands. At the same time the transition from one to the other habit of life is far more common than is generally supposed. In Anatolia, as in Persia, the increase or diminution of the agricultural element is a question not so much of race as of public security. The Turcomans especially pass readily from the nomad to the

settled state in peaceful times, when the camping-grounds soon give place to permanent hamlets. Even the Chingani, or Gipsies, tramps, horsedealers, tinkers, who are very numerous in Anatolia, and who usually camp on the outskirts of the towns, are often confounded with the Yuruks under the general designation of Turkomans. In Lycia, where they reside in permanent villages, the Gipsies are chiefly stock-breeders.

In the same region villages and encampments often belong to totally different nationalities—Greeks in one place, Cherkesses in another, elsewhere Turks or Yuruks. In the towns also every race has its separate quarter, so that no general ethnological map could convey a complete idea of all these intermingled yet distinct populations. Even where the people belong to the same stock, they are frequently split up into tribes living apart and at times hostile to each other. Certain Afshar or Turkoman hordes prowling about the Turkish villages differ from the residents only in their habits of life and traditions of independence. They constitute distinct communities, who seek to distinguish themselves from their neighbours by their arms and costumes. Conspicuous amongst them are the Zeibeks of the Misoghis highlands, descendants of one of the first intruding Turki tribes, who have kept alive the memory of their ancestral glories, and who still endeavour to impose by the splendour of their attire. Thanks to this love of finery and of sumptuous arms, these tall and athletic Tatars have unjustly earned the reputation of dangerous brigands. At the same time they are certainly a warlike people, with traditions of honour, full of pride, and, as the name implies, each "a prince unto himself." They fancy the whole world is theirs by right, and the Turkish Government has in vain endeavoured to assimilate them to the rest of the population by interdicting the use of their national costume. Other means have been adopted to enforce submission; nearly all the young men have been pressed into the service, and thousands perished on the Bulgarian battlefields during the late Russo-Turkish war.

"Turk," in the ordinary language, is a term applied indiscriminately to all sedentary Mohammedans in Asia Minor, whatever be their origin. Thus the numerous Albanians sent against their will to serve in the peninsula are regarded as Turks, although through their Pelasgian forefathers really akin to the Greeks. The Mussulman Bosniaks and Bulgarians, who since the recent wars have migrated in thousands across the Bosphorus, are also called Turks, although belonging to the same race as the Serbs, Croatians, and Russians who drove them out. The Nogai Tatars, from the Crimea, are more entitled to this name, being really of the same stock and speech as their Osmanli rulers. The term is applied also to the officials, the offspring of Georgian or Circassian women, and more remotely descended from all the nations whose captives have for ages peopled the harems. Lastly, amongst the Osmanli are also grouped the descendants of the Arabs and negroes formerly imported by the slave-dealers from every part of Africa. In many Anatolian towns a great part of the population shows traces of negro blood, while whole villages in the Jebel-Missis, near Adana, are inhabited by blacks. The Kurds, however, notwithstanding their common Mohammedan faith, present such a marked contrast to the Osmanli in their features and social usages, that to them the term

Turk is never applied. Like those of the Zagros and Upper Tigris and Euphrates basins, they are for the most part evidently of Iranian origin, although amongst the Anatolian Kurds the Kizil-bashes are very numerous.

The Turks, properly so called, that is, the Turkoman section of the community which has adopted a settled life and embraced the Mussulman faith, are seen to much greater advantage in Anatolia than in European Turkey. They are generally of a swarthy complexion, with black hair and eyes, slightly prominent cheek-bones, great muscular power, but bad address, a heavy slow gait, rendered more ungainly by too ample garments. They lack the grace and activity of the Iranians, but thanks to their frugal and temperate habits, they are a remarkably healthy race, subject to few maladies. Most of them may be described as "flat-heads," the occiput being compressed by the position of the infant in the cradle. On the Asiatic side of the Bosphorus, especially round about Olympus, where they are less mixed than elsewhere, the Osmanli still preserve all their natural qualities. Here they feel themselves more at home than in Thrace, in the midst of Greek, Bulgarian, Albanian, and so many other foreign elements. When uncorrupted by the enjoyment of authority, or not debased by oppression, the Turk certainly contrasts favourably with most other peoples. His very honesty, truth, and uprightness have made him a subject of ridicule and compassion in the eyes of his Greek, Syrian, Persian, and Armenian neighbours. Possessing the sentiment of solidarity to a high degree, he willingly shares with his comrades, but seldom asks in return. Whatever may be said to the contrary, the "bakshish" nuisance is a greater evil in Southern Europe than in the East outside the large towns, where the Levantine element prevails. What traveller, however haughty and suspicious, has failed to be deeply moved by the hearty welcome always awaiting him in the Anatolian Turkish villages? At sight of the traveller, the head of the family hastens to help him dismount, receives him with a pleasant smile, spreads the most costly carpet in his honour, invites him to rest and refresh himself. Respectful, but with the dignity of one who respects himself, he spares the stranger all indiscreet questions, and essentially tolerant himself, especially avoids all religious discussion. Different in this respect from the disputatious Persian, he is satisfied with his own belief, and leaves others to their conscience and their God.

In the family the Turk is never false to the true spirit of kindness and justice. Despite the latitude of the Koran and the example of the pashas, monogamy is the rule among the Asiatic Osmanli, and whole cities, such as Phocæa, are mentioned in which not a single case of polygamy occurs. No doubt in the rural districts a second wife is taken in order to have an extra assistant, while in some manufacturing towns employers seek to increase the number of hands by this means. But under all circumstances, the Turks are far more faithful to the marriage ties than are some western communities. Absolute mistress in her home, the wife is always treated with kindness, and the children, however young, are already considered as equals by right. The natural kindliness of the Turks is nearly always extended to the domestic animals, and in many districts the asses are still allowed two days of rest in the week.

Although descendants of the conquering race, amongst whom are chiefly selected the Government officials, the Turks are themselves no less oppressed than the other nationalities of the empire, while in the embassies they find no one to plead in their favour. The taxes, usually farmed out to Armenians, who have become the worst oppressors of the land, weigh heavily on the unfortunate Osmanli, burdened as they are by so many other charges. To passing officials and

Fig. 111.—Turkish Woman of Brussa.

troops the villagers are bound to supply all requisites freely, and this enforced hospitality often impoverishes them as much as downright plunder itself.

When the approach of functionaries or military is announced, the inhabitants leave their dwellings and take refuge in the woods or mountain gorges. The conscription also falls exclusively on the Turks, and by a people amongst whom the family sentiment is so highly developed, this blood-tax is naturally held in special abhorrence. During the period of conquest the Osmanli moved forward in clans and families, old and young, wives and sisters, following the warriors to the battle-field, conquerors or vanquished all sharing the same lot. But now the conscription carries off the young men not merely for a few months, or four or five years, as in Western Europe, but for a long period, and often for their whole life. The con-

scripts, mostly married for two or three years, have thus to part from parents, wife, and children, and all the family ties become suddenly broken, perhaps for ever.

Weakened and threatened in their national existence by the systematic blows of this enforced military service, endowed also with the fatal gift of resignation, the Turks are exposed to the greatest danger in the vital competition with a race possessed of a more enterprising spirit. They cannot contend successfully with the Greeks, who by pacific means are avenging themselves for the war of extermination of which Cydonia and Chio have preserved the traces. In the struggle the Turks are heavily handicapped, being mostly ignorant and artless, and speaking their mother-tongue alone; whereas the Greeks are clever, full of subterfuge, and acquainted with several languages. Without being lazy, the Turk dislikes hurry. "Haste," he says, "is the devil's; patience is God's." He cannot dispense with his *kief*, a vague dream in which he lives the life of plants, free from the effort to think or will. His very excellences tell against him. Honest and faithful to his pledged word, he will work to the end of his days in order to discharge a debt, a quality of which the money-lender takes advantage to offer him long and ruinous credits. "If you wish to succeed," says an Anatolian commercial axiom, "trust the Christian to one-tenth, the Mussulman to tenfold his income." Thus trusted, the Turk no longer possesses anything he can call his own. All the products of his toil are destined for the usurer, into whose hands will successively pass his costly carpets, his crops, his live-stock, his very land. Nearly all the local industries except weaving and saddlery have already been monopolised by others. Deprived of all share in the seaborne traffic and in the industrial arts, he is being gradually driven from the seaboard to the interior, where he lapses to the nomad life of his forefathers. If agriculture is still left to him, it is only that he may till his own land as a hireling. Presently nothing will remain open to him except the guidance of caravans or a purely pastoral existence. The Osmanli have been almost completely driven from the islands of the Ionian coast, while in the large maritime cities, where they were till lately the dominant element, they are now reduced to the second rank. In Smyrna itself, the great mart of their peninsular empire, they seem rather tolerated than obeyed. Even in certain inland towns Hellenic already counterpoise Turkish influences. The movement seems as irresistible as the surging tides, and the Osmanli are themselves as fully conscious of it as are the Greeks. Long since the summons to withdraw from Europe has been issued not only against the ruling Osmanli, but also against the mass of the Turkish nation, and we know that the cruel mandate has already been to a great extent realised. By hundreds of thousands the emigrants have taken refuge in Anatolia from Greek Thessaly, from Macedonia, Thrace, and Bulgaria, and these fugitives are a mere fragment of the victims that have had to quit their paternal homes. The exodus continues, and will doubtless cease only when the whole of lower Rumelia shall have again become European in speech, habits, and usages. And now the Turks are threatened in Asia itself. The ominous cry "To the steppes!" has been raised, and one asks in terror must this mandate also be realised? Is there no possible means of reconciliation between the conflicting elements? Is the unity of civilisa-

tion to be had only by the sacrifice of whole populations, and those above all which are most distinguished by the highest moral qualities—uprightness, truth, manliness, courage, and tolerance!

THE ANATOLIAN GREEKS.

The Greeks, those children of oppressed riots, who already regard themselves as the future masters of the peninsula, are probably to a large extent descendants of the Ionians and other maritime Hellenes. Still they cannot on the whole lay claim to any great purity of blood. The fusion has been complete between them and the various peoples who penetrated into the petty Ionian states, and who later on became Hellenised under Byzantine influences. The distinctive mark of Greek nationality as constituted in Asia Minor is neither race nor even speech, but religion in its outward forms. The limits of the nation, which may be estimated at about one million altogether, coincide with those of the orthodox communities. As in the island of Chio and in the Erythrean peninsula, many villages are inhabited by Osmanli, descendants of fugitives from the Peloponnesus, and speaking Greek exclusively. So also a large number of Greek communities usually converse in Turkish, and even write their ancient language with Turkish characters. Several villages in the Hermus and Cayster valleys have only revived the Greek tongue since the establishment of schools. Farther inland also numerous Greek populations are met within a few hours of the seaport who know Turkish alone. On the other hand there exist Hellenic communities which have scarcely been modified for the last two thousand years. Such are the inhabitants of Karpathos, Rhodes, of some other neighbouring islands, and of some valleys on the Carian coast, where the old Dorian idiom has left a large number of words. In the islands of the archipelago vestiges survive of customs anterior even to Hellenism itself. Thus in the interior of Cos and Mitylene the daughters alone inherit from their parents, and from them come the offers of marriage. When the eldest daughter has selected her husband, the father gives up his house to the couple.

At the neck of the peninsula on the Armenian frontier there survive some Greek communities which have resisted the influence of their Kurd, Armenian, and Osmanli neighbours, and which speak the old Hellenic language full of archaic forms that have disappeared from the Greek current on the Ionian seaboard. Thus Pharash (Pharaza), perched on a bluff overlooking the Zamantia-su on the border of Cappadocia and Cilicia, has preserved its Greek nationality in the midst of the surrounding Turkoman population. Proud of their primitive speech, the Pharaziots claim Peloponesian descent, and it may at all events be admitted that Hellenic colonists have here become intermingled with the descendants of the ancient Cappadocians, who had early adopted Greek civilisation. But unless fostered by the spread of education, the Greek language must soon disappear from the eastern provinces of the peninsula. In some of the former Greek-speaking villages, the national songs are now remembered only by the old, and in many families the rising generation has ceased to speak the language of Homer. Some

ASIATIC GREECE

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communities have even adopted Islam since the beginning of the present century, and similar conversions seem to have taken place during the time of the first Mohammedan invasions. The Afshars of Cappadocia, differing so greatly from those of Persia, are by some ethnologists suspected of being descended from the formerly Hellenised aborigines. Although speaking the same language as the other Mussulmans, they betray a marked resemblance to the ancient Greeks in their habits and customs. Now, however, the decadence of Hellenism in the inland villages seems to have reached its extreme limits. Those who have preserved the name of Greeks have also preserved the proud consciousness of their real or supposed origin, and the recently established direct relations with their western kindred will henceforth uphold them in the struggle for independent existence.

In any case the revival and expansion of the Greek national sentiment along the coastlands, has been so rapid that a rough calculation might almost be made of the time when the ancient Asiatic Hellas will be recovered as far as the central plateaux by the gradual and peaceful substitution of one race for the other. Although religion is the outward token of this ethnical movement, proselytism is not it chief leverage. The Anatolian Greeks are, in fact, seldom distinguished by their religious fervour; the clergy have but slight influence over them, and except in the villages, are rarely consulted on the secular affairs of the community. The true bond of union between the scattered Hellenic groups is patriotism. They feel their kinship with their brethren wherever settled on the Mediterranean seaboard, and apart from conventional political divisions, their eyes are turned rather towards Athens than Constantinople. At the same time, they see the fatherland not in any given city, but in the rising tide of Hellenism, surging up amidst the islands of the archipelago, and advancing along the encircling shores at so many points between Alexandria and Odessa. All the Anatolian Hellenes are animated by the "great idea," and all understand how it is best to be realised. No other race is more alive to the value of education in this respect, and their zeal for the instruction of the rising generation rivals that of the Armenians themselves. In every village the chief business of life is the schools, in the prosperity of which the wealthy classes take the deepest interest. On one point all are agreed, that is, the paramount importance of fostering the national sentiment and the pride of race in the young. All students are taught ancient Greek, and read the classic writers in whose pages are reflected the greatness and the glory that made their forefathers the teachers of mankind. All study modern history, and especially the heroic deeds performed by their race during the war of independence. Under the passive eye of their Turkish rulers, they inspire themselves with the thought of the day when these rulers must withdraw, and thus is their political emancipation being slowly and peacefully accomplished. To endow and support the schools, rightly regarded as the hope of the future, no sacrifice is grudged. Many private persons build colleges in their lifetime, while the sacred cause of education is never forgotten in the testaments of all patriots.

Thanks to this general spread of culture, the Greeks have already wrested from the Turks many industries and all the liberal professions. In the towns they are

the physicians, lawyers, and teachers; and as journalists or interpreters they have become the exclusive channel of information for Europeans. To their nationality everywhere belong the most skilful craftsmen, and a single visit to their dwellings suffices to show that they have not lost the inheritance of perfect rhythm and proportion bequeathed to them by their ancestors. Despite many centuries of barbarism and oppression, they still produce works which might serve as models for European artisans. In their houses the woodwork, floors, wainscoting, and ceilings are fitted with a marvellous nicety, while the eye is delighted by the taste displayed in the ornamentation and disposition of colours. In the port of Smyrna the boats of the humblest oarsman are masterpieces of solid building, graceful outline, and happy adjustment of all the gear and rigging. The only fear is, lest through love of change the imitation of western models beguile them from a purer standard, and induce them to copy objects of foreign workmanship far inferior to their own. In the Anatolian towns most of the Greeks already dress in the European fashion, ashamed of the rich and elegant national costume which lends so much grace and dignity to the carriage.

The Osmanli rulers are also threatened by the very ubiquity of the Greek element. Seafarer and traveller, as in the days of Herodotus, the versatile Greek is still everywhere to be found, his restless activity rendering him a match for ten sedentary Turks, who never quit the natal home except to breathe the purer air of the uplands in their summer camping-grounds. Amongst the Asiatic Greeks are a large number from Peloponesus, the European mainland and islands, while multitudes pass over from Anatolia to reside with their western brethren. Thanks to these frequent visits and the consequent family alliances, thanks also to the falsification of passports facilitated by the venal Turkish officials, many Ionian Greeks find little difficulty in making themselves legally subjects of Greece. Supplied with the documents exempting him and his from direct Turkish control, he returns to his Asiatic birthplace a proud citizen of the Hellenic State. Thus it happens that in Smyrna and the other Anatolian seaports the Greek consul finds himself enjoying jurisdiction over whole communities. In Turkish territory itself are in this way developed Hellenic colonies, possessing all the priceless advantages of political independence combined with the superiority derived from personal enterprise.

Amongst the Europeans migrating to Asia Minor there are many who are connected by the bond of religion with the Greek world, and who gradually become absorbed in it. Such are the Bulgarians and Wallachians, who soon learn the Greek language, and who in the second generation mostly adopt Greek habits of life. To these are added a number of Cossack fishing communities settled in the Kizil-Irmak and Yeshil-Irmak deltas, near Lake Maniyas and on the lower Cayster, in the neighbourhood of Ephesus. Like those of the Danube, these Cossacks are "Old Believers," who towards the end of the last century fled hither from the persecutions of the Russian Government.

But during the last few decades the stream of immigration has been swollen chiefly by the Cherkesses, a collective name under which are comprised all refugees

of Caucasian origin. Fearing to render them too independent in the Pontine or Taurus uplands, which would have been more congenial homes for these highlanders, the Turkish authorities have grouped them in scattered cantonments, mostly on lands taken by enforced purchase from the Turks and Hellenes. Here they naturally came to be regarded as intruders and brigands, the more so that they kept aloof from the surrounding populations, and found it difficult all at once to lay aside their old marauding habits. Thus all combined against them, especially in the Greek villages, and in many districts standing feuds, accompanied by much bloodshed, have since prevailed amongst these antagonistic elements. When a Cherkess strays into hostile territory he disappears suddenly, and no questions are

Fig. 112.—Inhabitants of Anatolia.
Scale 1 : 11,000,000.

asked. Nevertheless Cherkess communities have already been developed which, possessing sufficient land and live-stock, live in peace with their neighbours, and gradually adapt themselves to the new environment. Some of the Caucasian settlements in the upper Meander Valley might serve as models for the surrounding Osmanli, such is the care they take in tilling the land and keeping the irrigation works in repair. Of all these immigrants the Abkhasians have given least cause of complaint to the natives.

Formerly most of the Anatolian trade was in the hands of foreigners, nearly all Catholics of the Latin rite settled in Smyrna and the other seaports, and collectively known as "Levantines." Before the revival of the Greek nationality they

were the exclusive commercial agents between the Turks and the West of Europe. But the increasing activity of the Hellenes, combined with the facilities afforded for direct intercourse by steam navigation, has greatly diminished the influence of the Levantines. Settled for several generations in the peninsula, they are mostly a mixed race, speaking their several national languages indifferently, but always appealing to their consuls, and enjoying exemption from Turkish jurisdiction. Amongst them are nearly always chosen the consular agents and the official employés of the foreign representatives. Sooner or later they will doubtless disappear as a distinct class, and even long before them will also vanish the *lingua franca*, which has been developed by the commercial relations of the Levantines with the other inhabitants of the seaboard. This jargon, consisting of a few hundred words placed side by side without any inflections, was mainly Italian, but also comprised some Provençal, Spanish, and French terms, as well as a few local Greek and Turkish words connected with trade. But this crude form of speech has already almost ceased to exist, having been replaced by an Italian dialect and by French. In course of extinction is also the "Spaniol," another Levantine jargon introduced by the Jewish refugees from Spain—a barbarous or archaic Spanish mixed with a number of Hebrew expressions. Education is gradually substituting cultured languages for all these crude forms of speech, and in many parts of Anatolia French, often spoken with remarkable purity, has already become the real *lingua franca* of trade and social intercourse.

Topography.

From the very relief of the land, its inhabitants have necessarily been concentrated along the seaboard. Here are situated the great majority of the towns and large villages, and, as in the Iberian peninsula, with which Anatolia presents so many points of resemblance, the population diminishes in density towards the interior. Nevertheless the central plateaux, like those of Spain, contain a number of important places, serving as indispensable stations along the great trade routes crossing the peninsula from shore to shore. The water-parting between the Euxine and Mediterranean corresponds almost exactly with two distinct styles of architecture. The pitched roofs covered with tiles characteristic of the north are everywhere succeeded southwards by terraces of beaten earth or shingle, independently of the climatic conditions.

West of Cape Jason, regarded as the eastern limit of the Anatolian Pontine coast, the town of *Unieh* serves as the outpost of the rich Janik district, whose quarries yield fine red and white limestone blocks, besides the jasper of which were perhaps made the vases that Mithridates delighted to show his guests. The limestone hills of the interior are covered with a yellow argillaceous clay containing ferruginous ores, which are smelted and forged by the natives, possible descendants of the ancient Chalybes. The iron, refined with charcoal, is of excellent quality, and is bought up by the Turkish Government for use in the arsenals. On the

same coast are the small ports of *Falisa*, *Orlu*, and *Vona-liman*, the last of which offers the best anchorage along the whole Anatolian seaboard of the Euxine.

In the rugged upper valley of the Ghermili, chief affluent of the Yeshil-Irmak, the most important place is *Kara-hissar*, or "Black Castle," distinguished from so many other towns of like name by the special designation of *Sheb-Khaneh* (*Shabanah*, *Shabin*), so called from its alum mines. The produce of these works is conveyed over the Gumbet-dagh to the port of *Kerasun*, from which place a carriage-road has been traced, but not yet executed, to the quays of Tireboli. In the Ghermili Valley is also situated the ancient city of *Niksar* (Neo-Cæsarea), the *Cabira* of Strabo, which lies about 30 miles from the confluence of the two main forks of the Iris, 1,600 feet above sea level.

TOKAT—AMASIA—CÆSAREA—SINOPE.

Tokat, capital of the Upper Iris (Tosanli-su) basin, is one of the greater inland cities of Asia Minor, and a chief station on the highway between Constantinople and Upper Mesopotamia. Its suburbs and gardens stretch far along the side valleys, and 7 miles higher up stand the ruins of the sumptuous *Comana pontica*, where a Byzantine bridge crosses the Iris. The wretched earth or adobe hovels, of which Tokat largely consists, might easily be replaced by marble houses with the admirable building material from the neighbouring hills. On one of these stand the picturesque ruins of a Byzantine castle, while its sides are pierced by natural and artificial caves, which probably served formerly as a necropolis. The busy copper foundry of Tokat is supplied with ores from the Koben-Maden mines beyond Sivas, and its household utensils of this material are exported to Egypt, Persia, and Turkestan. The pears and apples from the surrounding gardens have a finer flavour even than those of Angora.

On the verge of the fertile Kaz-ova plain below Tokat stands the large village of *Turkhal*, commanded by a completely isolated pyramidal rock, which presents a curiously striking likeness to an Assyrian temple, and which is still crowned by a ruined fortress. On a plain watered by a tributary of the Iris south-west of Turkhal lies the town of *Zilleh*, the ancient *Zela*, whose citadel is also perched on an isolated eminence, on which formerly stood a famous temple of the goddess Anahit, regarded by the old Persian monarchs as the most sacred shrine of the national divinities. The numerous pilgrims at one time attracted to this spot have been succeeded by traders from all quarters. Zilleh has thus become one of the chief Anatolian market-towns. On the route leading north to Amasia lies the battlefield where Cæsar overthrew Pharnaces, king of Pontus, an event rendered memorable by his laconic description: "I came, I saw, and conquered."

Amasia, birthplace of Strabo, fills a narrow basin traversed by the Iris, just above its confluence with the Tersakan-su. East and west rise the lofty crags that shelter the city from the solar rays for several hours in the day. The less precipitous east heights are partly laid out in terraces, planted with vineyards and studded with houses. Those on the opposite side, at whose base are still visible

some remnants of the palace of the Pontine kings, present an almost vertical flank,

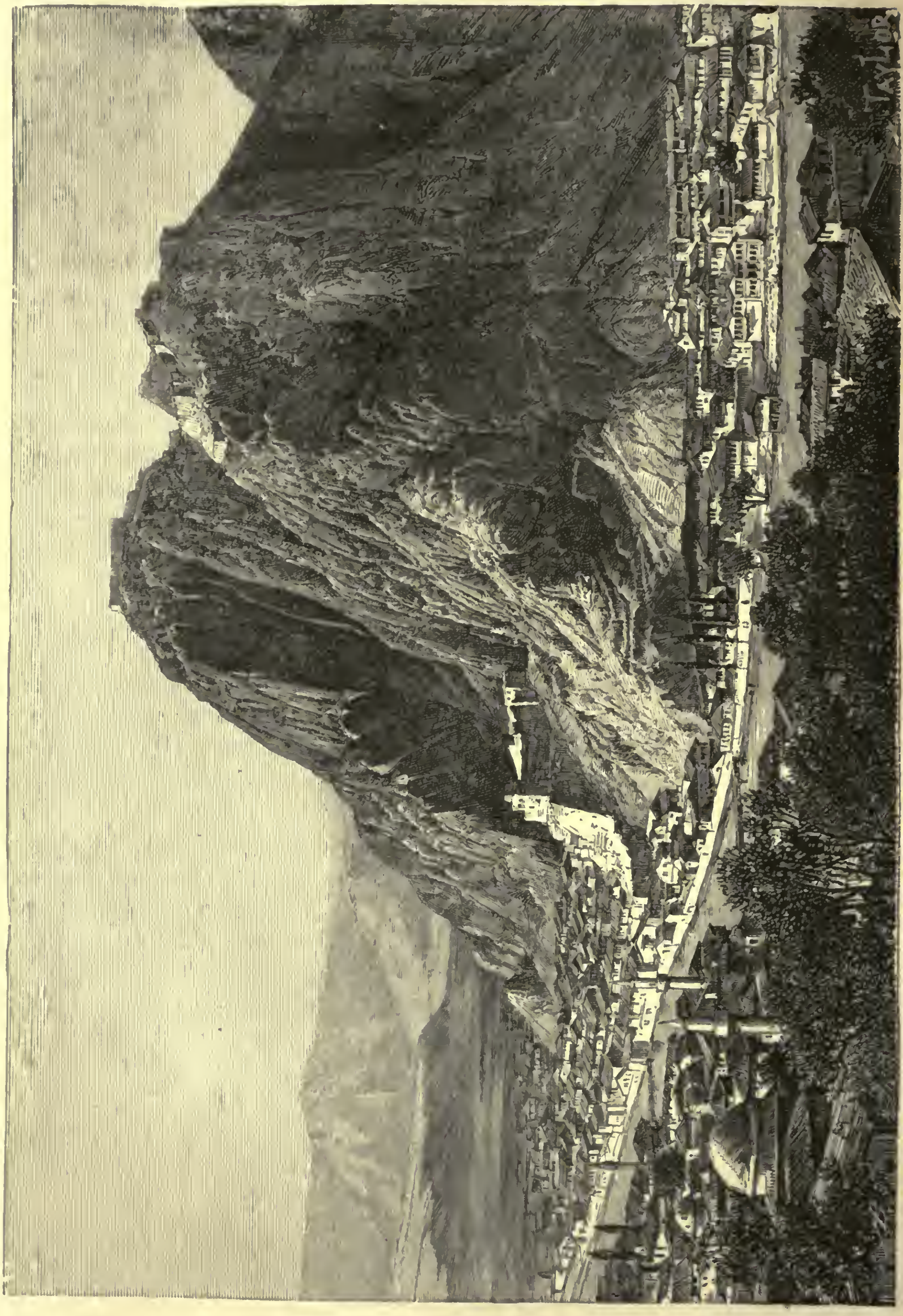


Fig. 113.—Amasia—View taken from the South-East.

topped by the citadel described by Strabo. The present fortress is almost entirely of Byzantine and Turkish erection; but there still remain two fine Hellenic towers,

besides galleries cut in the rock and leading to a secret spring in the interior. On the face of the bluff are shown five royal tombs, standing out sharply against the grey ground of the rock.

This old metropolis of Pontus has preserved no other remains except a few fragments of sculptured marbles used in building the piers of one of its bridges. But it boasts of a handsome mosque, fine fountains, quaint houses, large irrigating mills, and streets that may almost be called clean, thanks to the white vultures that act as industrious scavengers. There are also some local industries, such as silk-carding and cloth-weaving, chiefly carried on by the Greeks and Armenians, who

Fig. 114.—Amasia.

Scale 1 : 100,000.

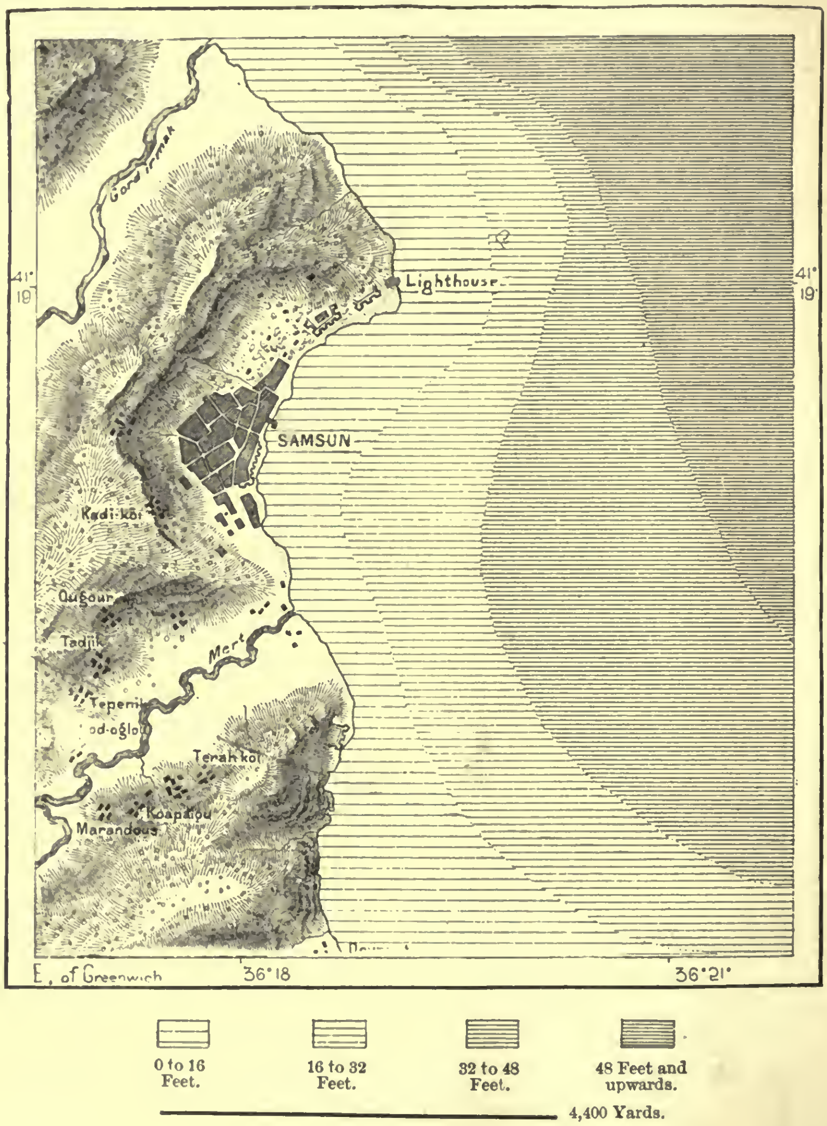
3,300 Yards.

constitute about one-fourth of the population. Nevertheless Amasia, the "Oxford of Anatolia," is a stronghold of Turkish fanaticism, containing some 2,000 Mohammedan students, who are distributed in eighteen medreseh or colleges, supported by revenues derived from lands, houses, and shops.

Along the lower Iris follow the towns of *Chorum*, *Mersifun* (*Mersivan*), and at the head of the delta *Charshamba*, a mere group of houses scattered along both banks of the muddy stream. Nearly midway between the two deltas of the Iris and Kizil-Irmak lies the modern port of *Samsun*, which has succeeded to the ancient *Amasus* of the Greeks, rather more than a mile farther north. The present town,

with its narrow dirty streets, has nothing to show except its roadstead, comprised between the two vast semicircles of the fluvial alluvia. Since the middle of the present century its trade has much improved, especially with Russia, and in

Fig. 115.—Samsun.
Scale 1 : 1,750,000.



numerous engineering projects Samsun is designated as the future terminus of a railway intended to run through Tokat and Sivas to the Mesopotamian plains.*

Sivas, capital of a large province, lies on the right bank of the Upper Kizil-Irmak, in a gently sloping plain some 4,000 feet above sea level. Notwithstanding some waste spaces strewn with rubbish, and debased structures dating from Persian

* Shipping of Samsun (1880), 310,000 tons.

times, Sivas is one of the most flourishing places in Central Anatolia, thanks to its convenient position at the converging point of the chief caravan routes between the Euxine, the Euphrates, and Mediterranean. The Armenians, who constitute a fifth of the population, have here several schools, and in the neighbourhood a much venerated church and a wealthy monastery. On the south side, near the village of *Ulash*, are some very productive salines worked by the Government.

Kaisarieh, the ancient Cæsarea and capital of Cappadocia, occupies an old lacustrine basin, south of the Kizil-Irmak Valley, sheltered from the southern rays by the gigantic Argæus, and traversed by a small affluent of the Red River. Nothing now remains of the lake except a swampy tract flooded in winter, when the overflow is discharged through the Kara-su, which also receives the drainage of Cæsarea itself. The ravine through which these waters escape is undoubtedly the outlet said by Strabo to have been dammed up in order to convert the plain into an inland sea. Of the ancient Cæsarea (Mazaca), which lay nearer to Argæus than the modern city, nothing survives except a few shapeless piles, while a more recent mediæval town overthrown by earthquakes is now a heap of ruins. The present Cæsarea, where the Greeks and Armenians form over one-third of the population, has lost some of its transit trade since the development of steam navigation along the seaboard. The chief place in the district is *Everek*, an exclusively Christian town at the southern foot of Argæus. Many of the surrounding villages are inhabited by Greeks, who for the most part now speak nothing but Turkish.

The main route running from Cæsarea westwards to the Bosphorus passes by the towns of *Injeh-su*, *Urgub*, and *Nem Shehr* (*Nev Shehr*), the last of which is one of the richest and largest places in the interior. About half of the population are Greeks, who have monopolised nearly the whole of the local trade. Urgub and the neighbouring village of *Uch-hissar*, or the "Three Castles," lie in one of the most remarkable districts of Asia Minor, famous alike for its natural and archæological curiosities. Here the ground, consisting of a layer of hard stone, rests like a slab on strata of tuffa, which are easily eroded by the action of water. The surface itself has in course of ages been weathered by sun, winds, and rains into a network of ravines, fissures, and barrancas. Some of the hills thus carved out of the tuffa have preserved their capitals of hard stone, like the argillaceous obelisks met in some of the valleys of erosion in the Alps. Others, rising to heights of from 30 to 300 feet, have lost their terminal block, and present the appearance of a vast encampment covered with thousands of tents. Most of these grey or reddish cones, encircled at their base with a zone of verdure, are pierced by openings giving access to interior recesses, the habitations of men, pigeons, or the dead. Some of the caves are simple square or round excavations, while others are approached by sculptured vestibules or colonnades, and decorated with paintings. Whole communities might be accommodated in these crypts, which were excavated in prehistoric times, and undoubtedly inhabited by the aborigines of the country.

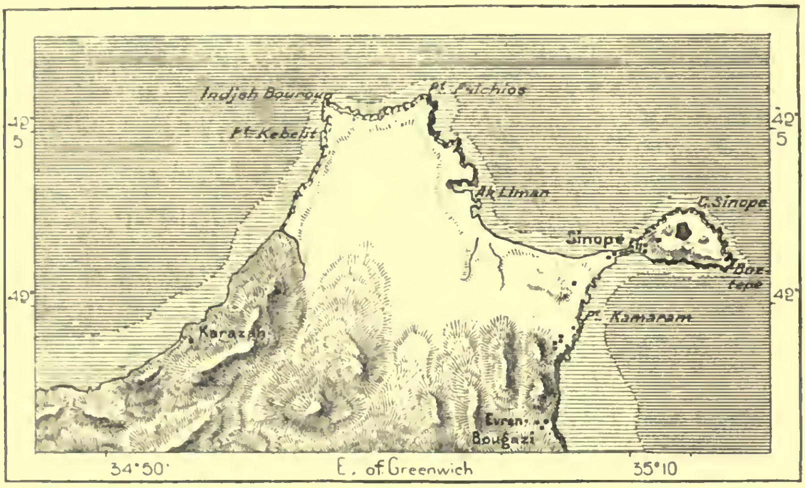
At the point where the Kizil-Irmak sweeps round from the north to the south-east, the town of *Kalejik*, standing on the left bank, commands the route here crossing the river from Angora through Yuzgat to Sivas. *Yuzgat*, which lies almost

in the geometrical centre of the great curve of the Kizil-Irmak, between Sivas and the Euxine, is of modern origin, dating only from the middle of the eighteenth century. It stands at an altitude of 5,950 feet, and would scarcely be inhabited in the cold season had it not been chosen as the civil and military centre of a large district.

This region was undoubtedly at one time more thickly peopled than at present, for it contains the ruins of numerous cities which appear to have been very flourishing, and which were adorned with sumptuous monuments. Some 24 miles north-west of Yuzgat, and near the village of *Boghaz-Koi*, are seen the ruins of a vast temple. The surrounding rocks are covered with bas-reliefs, representing solemn processions; and according to Terier, the city that occupied this site was the *Pteria*, destroyed by Crœsus over two thousand four hundred years ago; while

Fig. 116.—Sinope.

Scale 1 : 450,000.



0 to 80 Feet. 80 Feet and upwards.

6 Miles.

Hamilton identifies it with the *Tarium*, which Strabo describes as having at one time been a very commercial place. No less remarkable are the ruins of *Oyuk*, lying 24 miles farther north near the pyramidal trachytic rock of Kara-hissar. Here the old palace gateway is guarded by two gigantic animals, with the heads of women, body and feet of lions, and in style resembling the Egyptian sphinxes. Other sculptures, amongst which the two-headed eagle, revived by some modern empires, recall the hunting scenes and battle-pieces figured on the Persian and Assyrian monuments.

Changri, and *Iskelib*, lying in fertile river valleys tributary to the Kizil-Irmak, are considerable places; but the middle and lower courses of the main stream are almost destitute of towns. One of the most important is *Osmanjik*, standing on the

GENERAL VIEW OF SINOPE.

right bank at the head of an old stone bridge with fifteen arches, crossed by the direct route between Constantinople and Amasia. Lower down follow the manufacturing town of *Kastamuni*, one of the chief stations on the road from Constantinople to Samsun, *Tash-Köpri*, or "Stone Bridge," which has replaced the ancient *Pompeiopolis*, *Vizir-köpri*, lying in a valley, and *Bafra*, the chief mart of the delta. The tobacco grown in this moist and fertile region is shipped for Constantinople at the little port of *Kunjaz* or *Kumjiugaz* on the east side of the delta.

The ancient Assyrian city of *Sinope*, colonised twenty-seven centuries ago by the Milesians, lies near the northernmost headland of Anatolia, on an almost insular limestone rock covered here and there with trachytes and volcanic tuffas. The absence of communications with the interior almost severs it from the mainland, so that it may be regarded as a sort of island, owing its importance entirely to its maritime advantages. A narrow sandy isthmus connects the hilly peninsula with the mainland, and the cliffs overlooking this neck of land afford an attractive view of Sinope with its two roadsteads and surrounding district. But except a few fragments of sculptures and inscriptions built into its Byzantine walls, Sinope has preserved no remains of the monuments erected here when it was a free Greek city, birthplace of Diogenes the Cynic, or later on in the time of Mithridates, who was also a native of this place. Although unsheltered by any pier or breakwater, the southern and more frequented harbour affords perfectly safe anchorage even against the dangerous west winds. The Turkish Government has rebuilt the arsenal and dock destroyed when the squadron at anchor in the harbour was burnt by the Russians at the beginning of the Crimean war in 1853. The local trade is limited to the export of wood and fruits.*

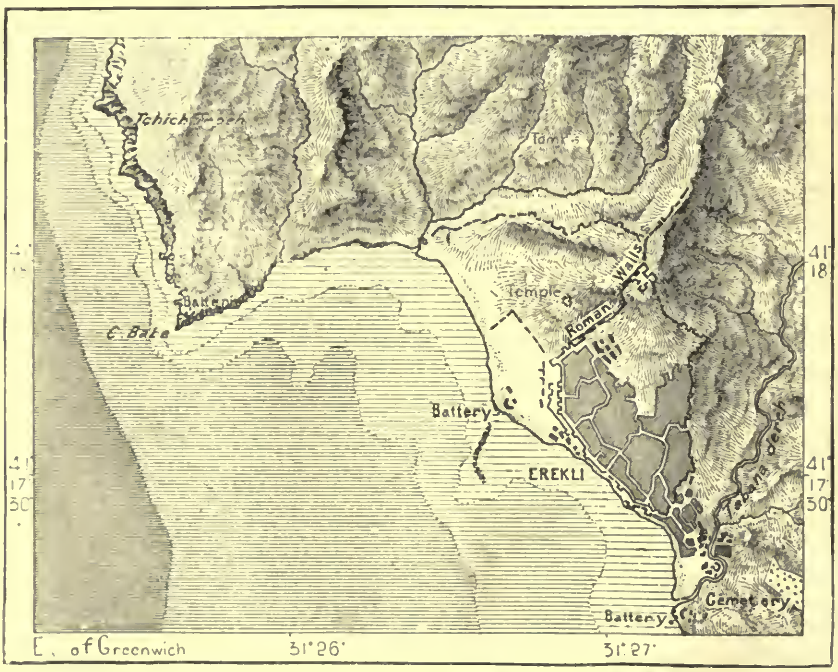
West of Cape Syrias (Injeh-burnu), western limit of the olive, as already remarked by Xenophon, the rocky headlands enclose a few small havens, such as the old Greek colony of *Ineboli*, *Sesamyus*, *Amastris* (*Amasra*), where are still visible the remains of a hanging garden supported on nineteen colossal arches; *Bartan*, also of Greek origin, lying over 2 miles inland on the ancient Parthenius, navigable to this point by vessels drawing 7 feet. The Filias (Billæus), a more copious stream than that of Bartan, but obstructed by a bar at its mouth, waters the gardens of the two important towns of *East* and *West Boli*. The former, specially known as *Zafaran-Boli*, from the saffron here largely cultivated and exported chiefly to Syria and Egypt, lies in a large and fertile basin traversed by the Sughanli-su, an affluent of the Filias. The latter, the ancient *Bithynium*, stands at an altitude of 2,860 feet amidst the hills crossed by the route from Erekli to Angora. It is commanded by a ruined citadel perched on a lofty bluff, whence stretch southwards the long wooded ridges of the Ala-dagh, or Galatian Olympus. On the western headland, overlooking the mouth of the Filias, are scattered the ruins of the city of *Tium*, the "Pearl of the Euxine," whose ivy-clad walls and gates, amphitheatres, temples, tombs, and aqueducts, now lie half buried amid the foliage of forest trees.

* Shipping of Sinope (1880), 113,000 tons.

Heraclea, Ancyra, Scutari, Brussa.

Erekli, the ancient *Heraclea*, or "Port of Hercules," although much decayed, is still one of the most charming towns on the coast. Lying at the issue of a verdant glen on a creek sheltered by a headland from the north wind, it is enclosed by old walls hidden here and there by clumps of trees, and encircled by beech-clad hills stretching away beyond the horizon. Erekli seems destined to become one of the chief ports on the Euxine, as soon as the resources of the country shall be properly developed. The neighbouring coalfields, feebly worked since the Crimean war,

Fig. 117.—Erekli.
Scale 1 : 12,500.



0 to 16 Feet. | 16 to 32 Feet. | 32 to 64 Feet. | 64 Feet and upwards.

6 Miles.

stretch east and west for a distance of at least 70 or 80 miles, with a mean breadth of 6 miles, and contain beds 12 or 14 feet thick. A few remains of the ancient Heraclea still survive within the modern enclosure, and amid the rocks of the northern headland is shown the cave of Acherousia, where Hercules descended to shackle Cerberus and vanquish death. In the hilly and wooded district stretching southwards to the Ala-dagh lies the town of *Uskub*, the ancient *Prusa* (*Prusias ad Hypium*), where may be seen the remains of a Greek threatre, and some long and curious incriptions.

Ak-serai, or the "White Palace," capital of the almost desert region of which the Great Salt Lake occupies the chief depression, is inhabited exclusively by Turks,

and produces little except the saltpetre collected under the walls after the rains. Towards the south the spurs of the Hassan-dagh are covered with the remains of cyclopean structures, citadels, tombs, and temples, dating from the times anterior to the Macedonian conquest. *Viran-shehr*, the "Deserted City," is supposed by Hamilton to be the *Nazianzum* known in ecclesiastical history as the birthplace of Saint Gregory.

The lacustrine basin enclosed by the Emir-dagh and Sultan-dagh is much more thickly peopled than the saline Lycaonian steppes, and here are found the impor-

Fig. 118.—Remains of the Temple of Augustus and Rome at Ancyra.

tant towns of *Ilgun*, *Ak-shehr*, *Bulvadin*, *Afium-kara-hissar*, the last named a large and industrious place producing morocco-leather, carpets, and woollen fabrics. It is one of the chief stations on the route from the Bosphorus to Syria, and is probably destined to form the junction of the two lines from Constantinople and Smyrna on the future railway to India. Beyond the northern hills lies the ancient *Eski-kara-hissar*, which contains some of the finest sculptured marbles in Asia Minor, tombs, baths, and columns, the materials for which were supplied from the neighbouring quarries.

The region about the head waters of the Sakaria abounds in ruins, but is now but thinly peopled. The debris strewn over an extensive plain at *Hergan-kaleh* are supposed by Hamilton to mark the site of *Amorium*, while in the broken shafts and friezes at *Bala-hissar* Texier recognises the remains of *Pessinus*, where the Gauls (Galatians) erected a temple to Cybele. The old Greek and Galatian cities have been succeeded by *Sevri-hissar*, which stands nearly 3,500 feet above the sea, at the south foot of a precipitous granite crag sheltering it from the northern winds.

The Enguri-su, or eastern branch of the Sakaria, waters the plains of the famous *Engurieh* or *Angora*, the ancient Galatian capital, which became the chief centre of western civilisation in the interior of Anatolia. The modern town is an uninteresting place standing on a plateau over 3,000 feet above sea level, which is here intersected by low monotonous hills. But Angora, the Ancyra of the Greeks and Romans, contains the remains of a fine temple dedicated to Augustus and Rome, now enclosed within the precincts of the Haji Beirami mosque. Here is to be seen the precious "Ancyra Monument," a bilingual inscription in which Augustus in his seventy-sixth year relates his great deeds, his conquests, and the buildings erected by him. The Latin text and Greek translation of this important historical document were not critically determined till 1861. The walls and gates of Angora are to a large extent constructed with the fragments of Roman edifices, temples, colonnades, and amphitheatres. A lion in good style is embedded in a Turkish fountain near the modern gates, and in a gorge one day's march towards the south-west MM. Perrot and Guillaime have discovered a Hittite monument, representing two large figures wearing tiaras and pointing with the right hand towards the west. Above these sculptures rise the cyclopean walls of a fortress locally known as the *Giaur-kaleh*, or "the Infidels' Castle."

About a third of the population of Angora are Roman Catholic Armenians, who have forgotten their mother-tongue and speak Turkish exclusively. They are distinguished from those of Constantinople by a more lively temperament and less reserve towards strangers. The type also is less swarthy and coarse, many being characterised by light hair, blue eyes, oval faces, and a European physiognomy, whence Perrot's suggestion that they may possibly be a mixed race, partly descended from the old Galatian conquerors. Even the Galatian Mohammedans, the mildest and most genial in Anatolia, would seem to have a dash of Gaulish blood in their veins, although at least eighteen centuries have passed since the complete fusion of the Keltic element in the Anatolian population. The statement of Saint Jerome is often repeated that in his time—that is, in the fourth century of the new era—the language current in Ancyra was the same as that of the people of Treves on the Rhine. But for three centuries Greek had already superseded Galatian names, a sufficient proof that the Gaulish idiom had disappeared at this epoch. In Galatia no Keltic inscriptions or monuments have ever been found in any way recalling the remote western home of the invaders. During the last century the trade of Angora was chiefly in the hands of English, French, and Dutch merchants; but it is now monopolised by Greek immigrants from Kaisarieh,

cross fire of European and Asiatic batteries. The narrowest parts of the strait are guarded by the two Genoese towers of Anadoli-kavak, and Rumeli-kavak, while the pleasant towns of Buyuk-dereh and Therapia, with their marble palaces, plan-

Fig. 119.—Asiatic Suburbs of Constantinople.

Scale 1 : 78,000.

0 to 64 Feet. 64 to 160 Feet. 160 to 320 Feet. 320 and upwards.

3,300 Yards.

tain-groves, and shady gardens are reflected on the east side by the white colonnades, cupolas, minarets and verdant glens of *Beikos*, *Injir-koi*, *Chibuklu*, and other Asiatic villages. The centre of the passage, guarded on the west by the strong

TURKISH BATTERIES AT THE BLACK SEA ENTRANCE OF THE BOSPHORUS.

towers of Rumeli-hissar, built by Mahomet II., is defended at the opposite point by those of Anadoli-hissar, dating from the same conqueror.

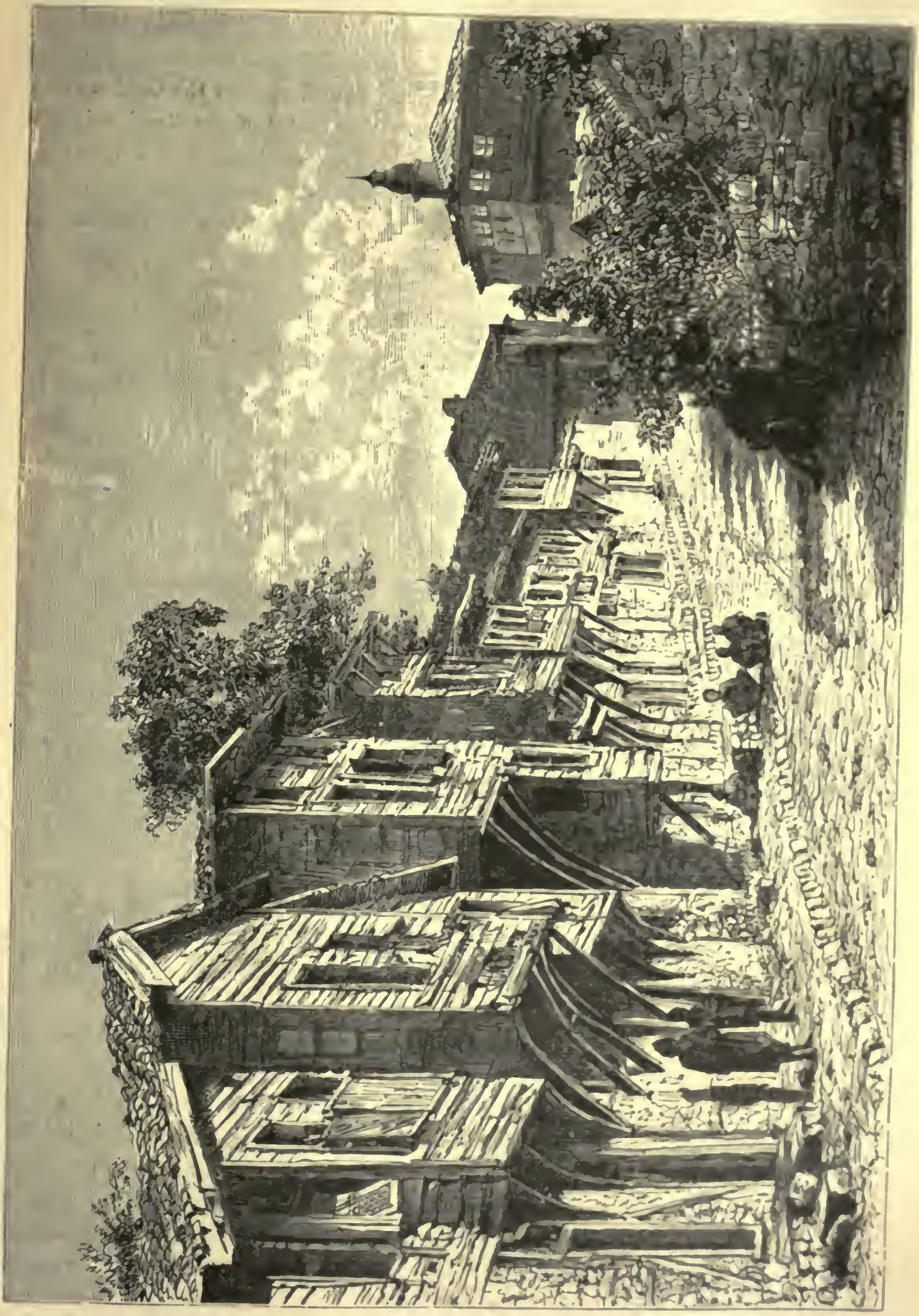


Fig. 120.—Street View, Scutari.

Just south of the Anatolian Castle, the valley of the "Sweet Waters" marks

the limits of the Asiatic suburbs of Constantinople—*Kandili, Vani-koi, Kuleli, Chengel-koi, Beiler-bey, Istavros, Kuz-gunjuk,* and *Scutari* (*Uskudar*), which stretch about 6 miles in a continuous line along the east side of the Bosphorus. They jointly contain upwards of ten thousand inhabitants, grouped in Turkish, Greek, and Armenian quarters according to their several nationalities. More than half of the whole number are concentrated in Scutari, which lies over against the Golden Horn, and here the Turkish element greatly prevails. Unmindful of the Greek origin of the ancient *Chrysopolis*, the Osmanli have come to look on Scutari as a holy city. For them it is the extreme promontory of the fatherland, and when driven from Stambul, hither must they withdraw, say their prophets. On the brow of the hill

Fig. 121.—Environs of Scutari—Turkish Ladies Abroad.

in the background stand the great cypress trees overshadowing perhaps some millions of their dead, their dust mingling with that of other millions of Byzantines, Thracians, and still earlier settlers. Hitherto the Ottoman town has been little modified by European innovations. Many quarters have preserved their original character; the fountains with their arabesque carvings, the sculptured tombstones, the two-storied wooden houses with their projecting gables, the steep winding streets and shady plantains, remain unchanged. From Mount Bulgurlu, overlooking the town, a superb panorama is commanded of Constantinople, the Bosphorus, and Propontis.

South-east of Scutari the line of suburbs is continued by huge barracks and

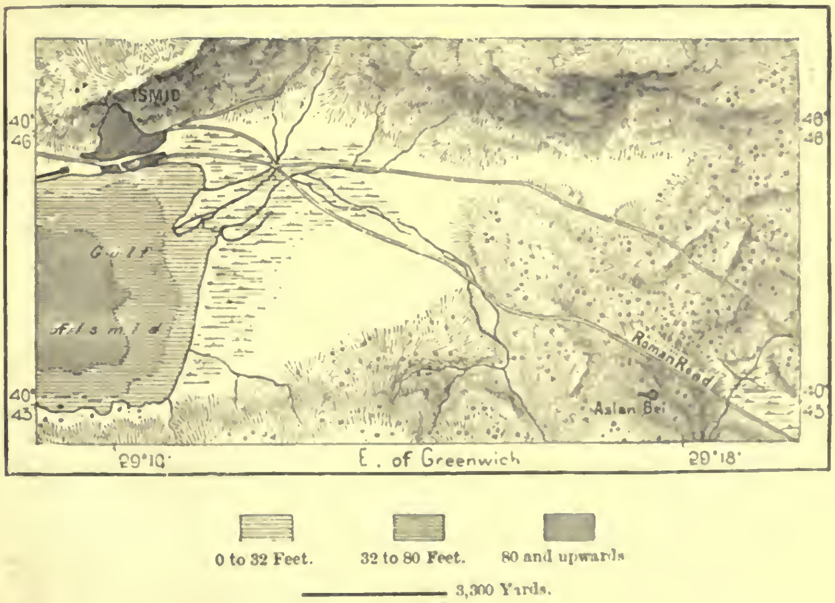
CYPRESSES IN THE CEMETERY OF SCUTARI.

cemeteries as far as the headland of *Kadi-koi*, the ancient *Chalcedonia*. Here has already begun the European invasion that is gradually changing the aspect of the place. The resident population is chiefly Greek, with a few hundred merchants, mostly English, from Constantinople. On the plain separating Kadi-koi from the great cemetery of Scutari were formerly assembled the armies of the padishahs for their Asiatic expeditions. Here, close to the "largest barracks in the world," now stands the Haidar Pasha terminus of the railway which skirts the north side of the Gulf of Ismid, and which is destined one day to be continued through Syria and Babylonia to India. It touches at the little ports of *Mal-tepeh*, *Kortal*, *Pendik*, and reaches *Ghabize* (*Ghybissa*,) where Hannibal died, and where a hillock shaded by three cypresses is said to preserve the ashes of the great captain.

Ismid (*Iskimid*), the ancient Nicomedia, "built by a son of Neptune," and

Fig. 122.—Ismid.

Scale 1 : 156,000.



which Diocletian wished to make the imperial capital, is admirably situated at the extremity of the gulf of like name on the advanced spurs of a lofty hill facing southwards. The town, with its docks and harbour, is commanded by a modern imperial kiosk and a fine old Greek acropolis flanked with Roman and Byzantine towers. Nicomedia may be regarded geographically as the real port of the Sakaria River, from which it is separated only by a low eminence west of Lake Sabanja. But notwithstanding its convenient position at the converging point of all the inland routes, its trade is limited to the exportation of some wood and corn.

An analogous position is occupied by *Ghemlik*, at the eastern extremity of a gulf which penetrates far inland, and communicates with the Sakaria Valley by the depression of the lake of *Nicæa*. The latter place, now called *Isnik*, is reduced to a wretched village, lost within its double Roman enclosure, and almost completely

deserted during the unhealthy season. Yet from a distance Nicæa, "City of Victory," residence of the Bithynian kings and birthplace of Hipparchus, still looks like a large metropolis, so well preserved are its lofty walls and massive flanking towers. But within the ramparts all is desolation. Scarcely a vestige

Fig. 123.—Brussa.

Scale 1 : 330,000.

remains of its Roman monuments; the very mosques are in ruins, and the only noteworthy object is a small Greek church containing a coarse painting of the Nicæan Council, which in 325 embodied in its "Creed" nearly all the articles of faith comprised in the "Symbol of the Apostles." Nicæa was also a famous place during the Crusades. In 1096 the Christian army lost 20,000 men in the neigh-

BRUSSA—GENERAL VIEW.

bouring defiles, and the next year took the town by means of a flotilla transported overland to the Lake of Isnik.

Brussa, capital of the vilayet of Hudavendighiar, is one of the great as well as one of the most picturesque cities of Anatolia. Divided into several distinct quarters, separated from each other by shady glens and running waters, its red-roofed houses, gilded domes, and white minarets present a charming picture, seen from the fertile plain of the Ulfer-chai. Immediately above the city rise the densely wooded slopes of Olympus, which is girdled with successive zones of the chestnut, walnut, hornbeam, oak, and various species of conifers. Brussa, which retains in a slightly modified form the name of *Prusium* given to it by its founder, Prusias, king of Bithynia, preserves no remains of the Roman epoch. But notwithstanding the frequent earthquakes by which its buildings have been shattered, it still retains some precious monuments of the time when it was the capital of the Ottoman empire. Here Orkhan the "Victorious" received the title of padishah of the Osmanli, who had captured it in 1328, and here the Ottoman Turks first felt the consciousness of the strength, which made them a great power in the world. But after succeeding *Yeni-sher* as residence of the sultans, it was in its turn replaced first by Adrianople and finally by Constantinople as the imperial capital. Nevertheless it still remains a venerated city, where the faithful come to worship at the shrines of Osman, Mahomet II., and the other early sovereigns of the empire. Amongst its "three hundred and sixty-five" mosques, several are noted for the richness and beauty of their enamelled porcelains, and one of them, the Yeshil Jami, or "Green Mosque," has been restored by a French artist in the original style of Persian art. Brussa is the centre of a considerable trade, and has some flourishing industries, especially flour-mills and sericulture. But since 1865 the silkworms have suffered so much from parasites that the production of the raw material in the province of Hudavendighiar has been diminished by two-thirds, and the mean annual value of the crop has fallen from £1,250,000, and even £2,000,000, to £400,000. The forty-five spinning-mills now work almost exclusively for the Lyons market, and the foreign commercial relations of Brussa are carried on solely with France, through Armenian, Greek, and Turkish houses.

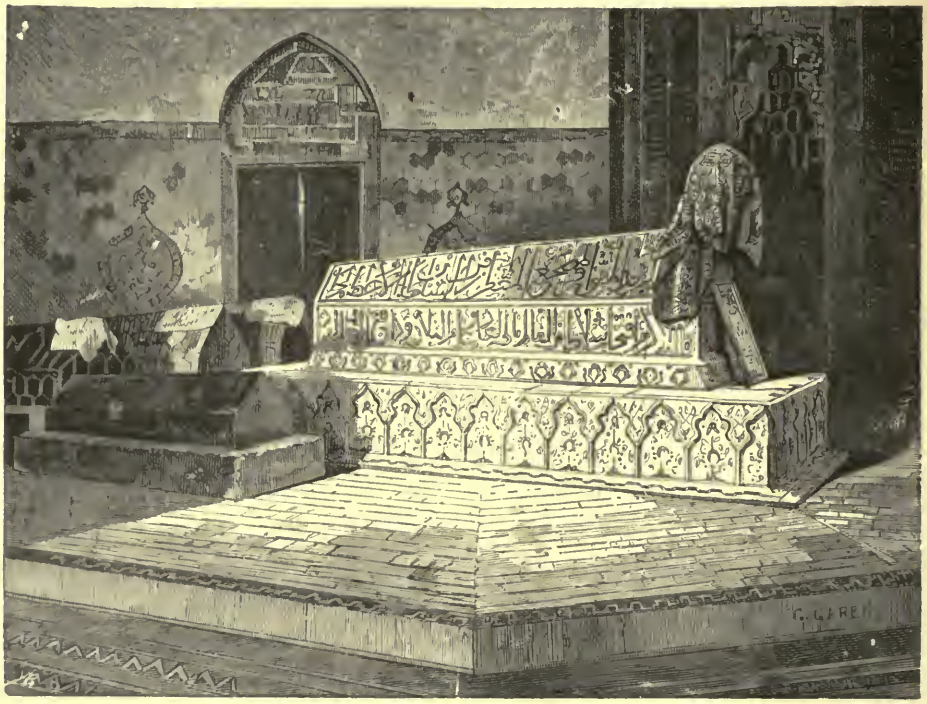
The permanent European colony at Brussa is temporarily increased in May and September by visitors to the medicinal waters of *Chekirjeh*, which are very copious and present a great variety of composition, with temperatures ranging from 92° to 208° F. During the summer heats the wealthy classes and visitors retire to the villas scattered over the slopes of Olympus, or else resort to *Mudania*, *Arnaut-koi*, and other marine watering-places. Mudania, the chief outport of Brussa, has an open roadstead, exposed especially to the north-east gales, when the shipping takes refuge in the port of *Ghemlik*. Since 1875 Brussa has been connected with Mudania by a railway 25 miles long, but which has never yet been opened to the public. The rusty locomotives, rails and sleepers carried off by the peasantry, roadway ploughed up by the rains, are emblematic of the solicitude displayed by the Turkish authorities for the public weal.

In the fertile valley of the Susurlu-chai, which yields rich crops of opium,

hemp, and tobacco, there are several flourishing places, such as *Simau*, near the ancient *Ancyra* of Phrygia; *Bogadich* (*Bogaditsa*); *Balikesri* (*Balak-hissar*), a much-frequented market-town; *Mualich*, at the junction of the Susurlu with the emissaries from Lakes Manyas and Abullion; *Apollonia* (Abullion) a fishing town on an island in the lake of like name.

Little now remains of the sumptuous city of Cyzicus, which occupied an admirable position on the south side of a hilly island now transformed to a peninsula, with two sheltered harbours facing the Hellespont and the Bosphorus. The strait has been completely filled up, and the two bridges which in Strabo's time connected

Fig. 124.—Tomb of Mahomet II. in the Green Mosque at Brussa.

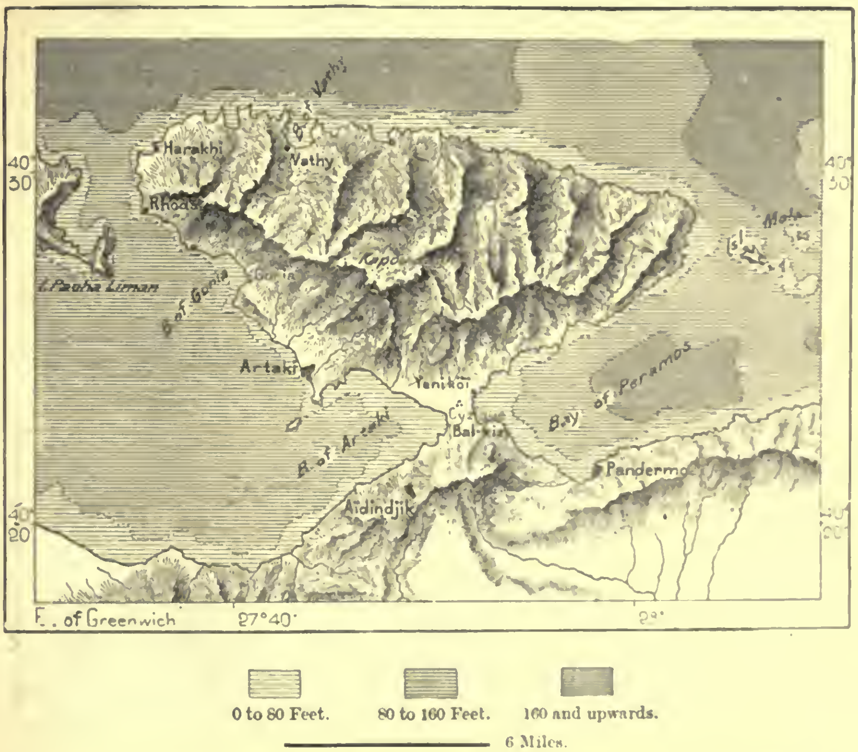


the island with the mainland, have given place to an isthmus about 1,200 yards broad. At present the eastern port has been replaced by that of *Pandermos* (*Panormos*), a small Turkish, Greek, and Armenian town regularly visited by the steamers from Constantinople. The western port has been succeeded by *Edek*, the ancient *Artake*, which is surrounded by vineyards yielding the best wines in Anatolia. Facing it on the mainland stands the large village of *Aidinjik*, where are seen numerous inscriptions found amongst the ruins of Cyzicus. In the neighbourhood are the marble quarries whence came the material used in facing the granite buildings of the city.

Troy, Pergamus, Sardes, Smyrna.

On the mainland stretching west of the Gulf of Erdek and of the Marmora islets, the only important place is *Bigha*, which lies some 12 miles inland, at the point where the Koja-chai (Granicus) escapes from the hills, and where Alexander gained his decisive victory over the Persians. Nor is the Asiatic side of the Hellespont much more densely peopled. Here *Lamsaki*, the ancient *Lampsacus*, whither Themistocles withdrew when exiled from Athens, is now a mere hamlet buried amid the surrounding olive-groves and vineyards. Of *Abydos* the very ruins have disappeared, or have been replaced by the barracks and batteries

Fig. 125.—Syzicus and Artaki Peninsula.
Scale 1 : 400,000.



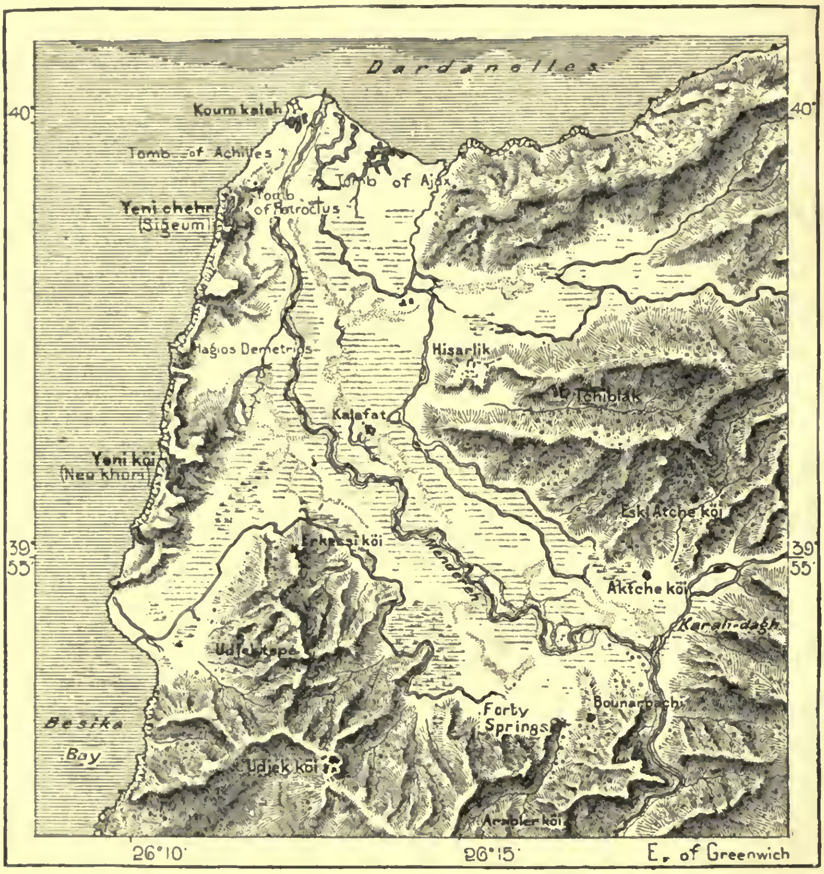
defending the entrance of the strait. The Castle of the *Dardanelles*, central point of all these fortifications, stands on the southern side at the mouth of the Chinarlik, the ancient Rodius. *Kaleh-Sultanieh*, as the Castle of the Dardanelles is officially called, may be regarded as the port of entry of Constantinople, where all vessels are obliged to cast anchor before passing on to the capital. This place also takes the name of *Chanak-Kalessi*, or "Castle of the Potteries," from the local glazed earthenware, noted for its eccentric forms. The surrounding hills abound in metalliferous deposits, of which the Government has mostly retained the monopoly.

On a headland south of Kaleh-Sultanieh are seen the regular lines of the acropolis of the ancient *Dardanus*, whose broken marbles strew the surrounding

slopes. Farther on the large Greek village of *Eren-koi* (*Itghelmez*), perched on a terrace planted with walnut and oak-trees, affords a distant view of the Trojan plain and conic mounds crowning the surrounding hills. The valley and a rivulet supposed by Schliemann to be the Simois, separates the Eren-koi heights from a chain of hills, the last of which, overlooking the marshy plain of the Mendereh, is the famous terrace of *Hissarlik*, or the "Fortalice," identified by most archæologists

Fig. 126.—The Troad.

Scale 1 : 160,000.



0 to 160 Feet. 160 and upwards.

3 Miles.

with New *Ilion*. Contrary to the opinion of Strabo, Schliemann regards it as the Homeric Ilion. Hence the natural tendency shown by the illustrious explorer to exaggerate the value of the discoveries which have resulted from the enormous labour undergone by him on this spot.

Here the solid rock is covered with remains disposed in regular layers, which date apparently from six different epochs, and which have a total thickness of 52 feet. Below the upper layer, belonging to the historic Greek period, a very

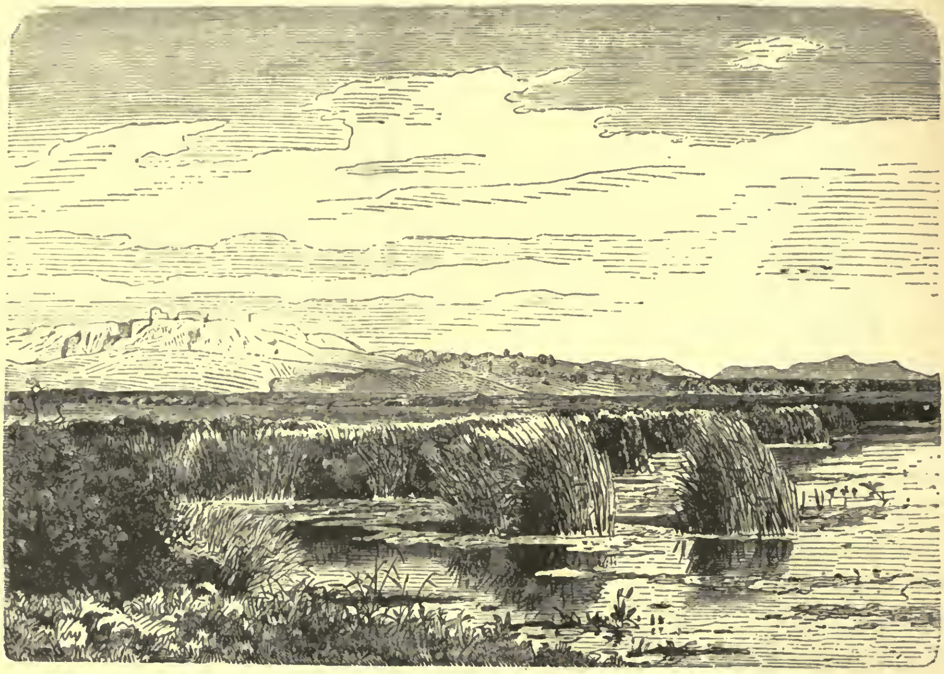
thin stratum containing vases of Lydian origin is followed by two strata, where the houses, of mean appearance, had been built of small stones joined together with mud, and plastered inside with clay. Beneath these is supposed to lie the *Troy* of the Iliad, a burnt city whose ashes contained a thousand objects attesting the Hellenic origin of the Trojans and their special worship of Athene. Lastly comes the lowest stratum, indicating the settlement of a people anterior even to legend. Judging from the form of the objects found in the ruins, the burning of Troy took place some thirty-six centuries ago, during the pure copper age, when the deities were represented with animal faces. Nevertheless the Hissarlik terrace, about 200 acres in extent, is much too confined to have ever afforded space for a large and strongly fortified city. It is also destitute of water beyond a little moisture oozing out at the foot of the cliff in rainy weather. According to Lechevalier and Forchhammer, the site of the ancient Ilion is to be sought rather on the *Bunarbachi* hill, south of the alluvial plain, which is strewn with shattered blocks, and which commands the west bank of the Mendereh with impregnable escarpments 330 feet high. The hovels of the present Bunarbachi stand on the north side, which slopes gently down to the plain, and at the foot of the cliff lie the "forty springs," which are collected in two rivulets flowing to a common channel regarded by Lechevalier as the true Scamander of the Iliad. Here no extensive excavations have yet been made, and the remains of buildings hitherto discovered do not belong to the proto-Hellenic period.

There exists a third Troy, built by Alexander the Great, on a headland of the Ægean facing the grey cliffs of Tenedos. This place was also long regarded as the residence of Priam, and its present name of *Eski-Stambul*, or Old Constantinople, illustrates the delusion which everywhere in this district conjured up a great city dating from the dawn of history. *Alexandria Troas* certainly presents some imposing ruins, fragments of ramparts, remains of baths, palaces, temples, and aqueducts. The quarries of a neighbouring granite hill contain columns resembling those brought to light at Bunarbachi and Hissarlik, and in one of them is a monolith over 36 feet in length. At present the inhabitants of the Troad are concentrated chiefly at the very extremity of the continent, in the isolated space limited on one side by the Mendereh, on the other by the Besika channel. Here the southern cliff is crowned by the large Greek village of *Neo-khori* (*Yeni-koi*), while on the north side the ancient *Sigæum* has been succeeded by *Yeni-shehr*, or "New Town," at the extremity of the cliffs. Still farther north the low point separating the mouth of the Mendereh from the Ægean is occupied by the fortress and small town of *Kum-kaleh*. The whole plain is covered with extensive cemeteries and sepulchral mounds, which with some trachyte cones help to break the monotony of the uniform slopes and crests. The mounds traditionally associated with the names of Achilles, Patroclus, Antilochus, Ajax and Hector, have probably no connection with these Homeric heroes, for the objects extracted from them date only from the Macedonian and imperial times. *Ujek-tepe*, the highest of the artifical eminences standing on the plateau on the east side of Besika Bay, was formerly consecrated to the Prophet Elias, and was annually visited by Greek pilgrims from the surround-

ing districts. But since the ground has been desecrated by Schliemann's excavations, the religious feasts have been discontinued, and the devotees have ceased to visit the spot.

Baba-kaleh, at the south-western extremity of the Troad, rises in picturesque terraces along the steep slope of the headland. A little farther east stands the ancient town of Assus, described by Leake as the perfect ideal of a Greek city, when speaking of the amphitheatre of its well preserved trachyte walls. *Edremid* (*Adramytti*), on the alluvial plain skirted northwards by the spurs of Mount Ida, is still a populous place, although its harbour has been completely choked by the alluvia of the torrents converging from all parts towards the neighbouring bay. On this coast the chief trading place is *Cydonia*, the *Aivali* of the Turks, which

Fig. 127.—Hissarlik (Ilion)—View taken from the Mendereh.



stands on a bay separated by the archipelago of the "Hundred Isles" from the Gulf of Edremid, and connected through its harbour with the isolated town of *Moskhinisia*. After its destruction by the Turks in 1821 this place long remained unoccupied; but it has been rebuilt by other Greek settlers, and is once more distinguished for its enterprise and commercial activity. Nowhere else in Asia Minor is the contrast more striking between the two rival races. Some 9 miles south-east of Aivali recently stood the Turkish town of *Ayasmat*, whose inhabitants massacred their Aivaliot neighbours in 1821, and usurped their vineyards and olive-groves. Now Ayasmat is reduced to about twenty wretched hovels on the edge of a vast necropolis, while the Greeks of Aivali have increased threefold, and repurchased their old landed property. The harbour having silted up, they have

excavated a channel over 12 feet deep, affording access to the vessels which here take in cargoes of oil, wine, and grapes.

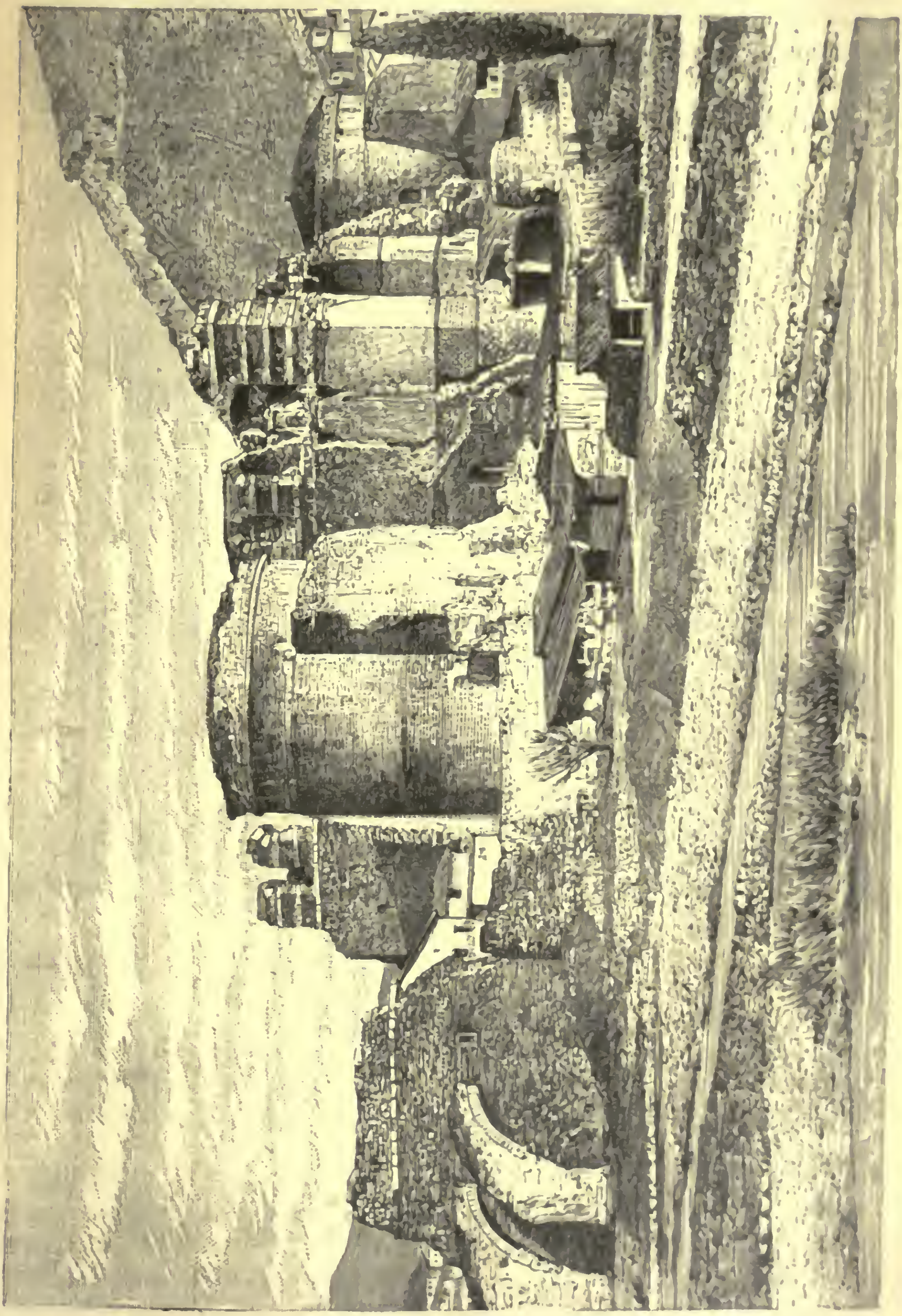
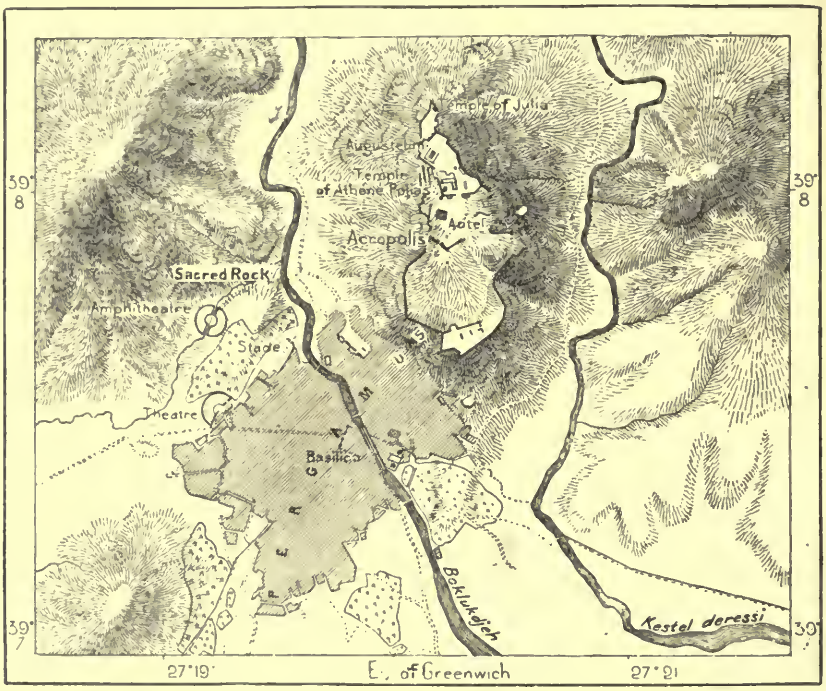


Fig. 128.—Pergamus—Ruins of the Basilica.

Mytilini, which carries on a large trade with Aivali and the other ports on the

mainland, lies on the west side of Mytilini, or Lesbos, the famous island that gave birth to Sappho, Alcæus, Terpander, Arion. The town is pleasantly situated under the shelter of a low hill crowned with irregular mediæval fortifications, which seem to have been constructed rather with a view to effect, so artistically disposed are the walls and ramparts amid the surrounding vegetation. The delicately tinted houses rise in a series of terraces along the slope, and are succeeded higher up by extensive olive-groves. In Mytilini, till recently called *Castro*, from its castle, are concentrated over a third of the inhabitants of Lesbos, nearly all Greeks, noted for their commercial enterprise. The harbour is unfortunately accessible only to light

Fig. 129.—Pergamus.
Scale 1 : 30,000.



Cemeteries.

1,100 Miles.

craft, and although Lesbos possesses the two really fine havens of Kalloni and the Olives, these lie off the main highway of vessels plying between the Gulfs of Smyrna and Edremid. Besides a Roman aqueduct at Mytilini, the remains of temples and citadels are scattered over various parts of the island.

In the fertile valley of the Bakir (Caicus), the chief places are *Kirkagach*, in a district which grows the best cotton in Anatolia; *Soma*, a centre of the corn trade, and *Bergama*, the ancient *Pergamus*, on the Boklujeh (Selinus), formerly one of the great cities of Asiatic Greece. Built in prehistoric times by the mythical Pergamus, son of Andromache, it became in the Macedonian era the capital of a kingdom, which the dynasty of Attalus bequeathed to the Romans. From this

period date the temple known as the "Basilica," and the remains of many other fine monuments. Over 1,000 feet above the plain rises the steep hill crowned by the acropolis, north-east of which a stadium, a theatre, and an amphitheatre mark the site of the *Asklepeion*, a watering-place famous in the Greek world for its salubrious air and its copious thermal springs. Pergamus also boasts of prehistoric monuments, galleries cut in the live rock, and four tombs, one of which is supposed to mark the grave of the founder of the city, and his mother, Andromache.

Until 1878 Pergamus had yielded but few antiquities of much importance. But since then, the German Government having obtained permission from the Porte to make a complete exploration of the acropolis, the upper terrace has been subjected to a thorough survey under the direction of Conze and other archæologists. About half of the ground, covering a space of 20 acres, has been carefully examined, and the plan of the buildings crowning the hill is henceforth clearly determined. On the south stood an altar over 130 feet on all sides, surrounded by colonnades; towards the centre of the acropolis the temple of Minerva Polias rose above the edge of the western escarpment, and several other structures were grouped round this sanctuary of the tutelar deity of the city. Farther on, at the culminating point of the hill, the Romans had erected an Augusteum, while the northern promontory terminated with a temple of Julia. Round the altar and temple of Minerva were found the most precious bas-reliefs, which with those of Olympia have become the glory of the Berlin Museum. About two hundred statues and sculptured pedestals of the best period were recovered from the ruins, besides an admirable frieze some 330 feet long, representing a battle of the giants, the last struggle of the Titans against the gods. In the whole range of Greek art there is no heroic subject treated with greater variety of invention combined with a more powerful grasp of the predominant idea and skilful execution. These Titans are supposed to symbolize the Gauls (Galatians), overthrown near Pergamus in the year 168 B.C. Another scarcely less interesting discovery was that of a Greek house two thousand years old, with all its compartments and mural paintings complete. Henceforth the name of Pergamus takes the same position in the history of art that it hitherto occupied in the history of the sciences, thanks to its illustrious citizens, such as Galen, and to the precious manuscripts written on the skins first prepared here, and hence called *pergamena*, whence our word *parchment*.

A road 17 miles long, constructed by Humann, explorer of the ruins, leads from Pergamus to its new port of *Dikli*, already a flourishing Greek town, the rise of which has seriously affected the trade of *Chandarlik* on the north side of the gulf of like name. On the opposite side the hamlet of *Lamurt-koi* marks the site of the ancient *Cumes* (*Cymé*), mother of the Italian Cumes, where Virgil places one of the entrances to the lower regions. Farther on the Greeks have founded the settlement of *Yenijeh-Fokia*, or "New Phocæa," on a part of the coast exposed to the north winds.

Karaja-Fokia, or simply *Fokia* (*Fugès*, *Foglerieh*) is the famous *Phocæa*, whose daring navigators founded Marseilles and so many other colonies. Its harbour, sheltered on the north and north-west by the little Peristerides archipelago, was

formerly defended by a citadel, whose ruins still cover the crest of a neigbouring headland. The modern town, inhabited almost exclusively by Greeks, is grouped round the beach, whence are visible the remains of an old acropolis overlooking the modern seaport of *Varia*, the *Haji-Liman* of the Turks. The trade of Phocæa

Fig. 130.—Phocea.

Scale 1 : 70,000.

is at present restricted to the export of salt, enormous heaps of which are piled up on the quays.

Ghediz, which gives its modern name to the valley of the Hermus, is a small

place standing on a creek commanded by the snowy crests of the Murad-dagh and Ak-dagh. It is probably the *Cadi* of the ancient Greeks, and occupies a position somewhat analogous to those of *Demirji*, *Gordiz*, and *Ak-hissar*, in the upper valleys at the southern foot of the hills skirting the northern edge of the Hermus basin. Ak-hissar, the ancient *Thyatira*, has preserved nothing but a few sculptured fragments of its old temples and palaces. It is now eclipsed by *Mermereh*, which stands on a hill on the north side of the lake of the same name.

Kula, lying in the "burnt" region south of the Hermus, is noted for its rugs and other woven goods, and is also an agricultural centre for the opium and other

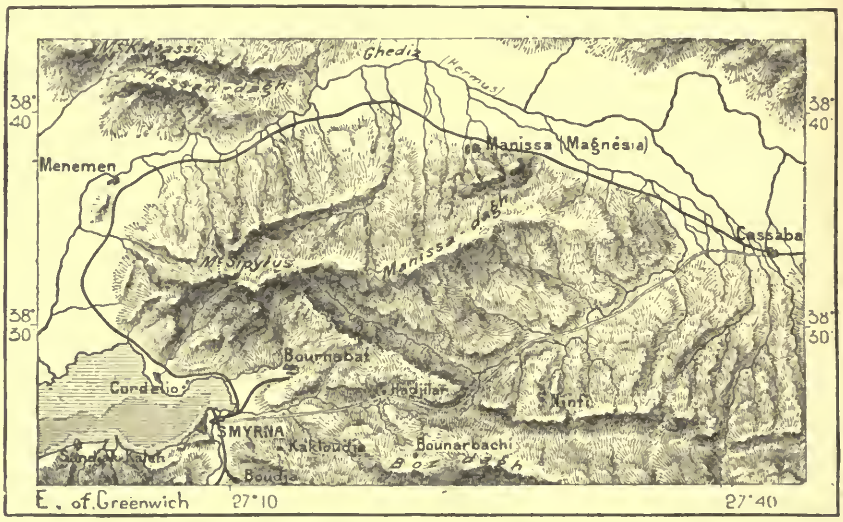
Fig. 131.—Sardes—Columns of the Temple of Cybele.

produce forwarded to Smyrna by the Hermus Valley railway. The present terminus of this important line is *Ala-shehr*, the ancient *Philadelphia*, founded by Attalus Philadelphus, king of Pergamus. Although frequently overthrown by earthquakes, Philadelphia, which lies at the foot of a spur of the Tmolus (Boz-dagh), in the valley of the Cogamus (Sari Kiz-chai), a tributary of the Hermus, still preserves the remains of several temples, of a stadium, a theatre, and of the city and acropolis walls. It was one of the "Seven Churches" mentioned in the Apocalypse, but no ruins have been discovered dating from the first period of Christianity. It was the last Anatolian city captured by the Turks, against whom it held out till the year 1390. At present its Greek inhabitants are increasing rapidly and developing an active local trade.

Sardes (*Sardis, Sart*), former capital of Lydia, is now a mere roadside railway station surrounded by a few sheds and hovels. It stands on the famous Pactolus, a rivulet flowing from Mount Tmolus to the left bank of the Hermus, and here crossed by a plank. The gold-dust washed down from the surrounding conglomerate and red argillaceous hills was used to strike the first known coins, and earned for the Pactolus a reputation for inexhaustible wealth. At present the native Greek and Turkish shepherds do not find it worth their while to wash the sands for the precious metal. Although a great part of the ground occupied by the old city has been covered by the alluvia brought down by the torrents from the spurs of Tmolus, the remains are still visible of some ancient monuments. Of these the first is the temple of "Cybele," probably a sanctuary dedicated by

Fig. 132.—Mount Sipylus.

Scale 1 : 700,000.



32 Feet. 32 Feet and upwards.

18 Miles.

Alexander to Jupiter Olympius, of which two lofty columns are still standing. Since the place was visited in 1699 by Chishull, the door and six columns, with their architraves, have all disappeared; but a systematic exploration would probably yield many precious sculptures from the renowned city of Crœsus. Farther north the numerous sepulchral barrows in the neighbourhood of Lake Gyges (Merlnereh) form quite a necropolis, known as the *Bin Bir Tepeh*, or the "Thousand and One Mounds." Of these the largest, traditionally assigned to Alyattes, father of Crœsus, is no less than 1,200 yards in circumference, but the explorations here recently made have only served to show that it had already been rifled by former treasure-seekers.

The modern town of *Durgutli*, lying west of Sardes, and better known by the name of *Cassaba*, stands at the foot of the hills in an extremely fertile plain watered

GULF OF SMYRNA—GENERAL VIEW OF KARA-TASH AND GIOZ TÉPÉ.

by numerous streamlets flowing north to the left bank of the Hermus. Here terminates the easiest route, leading from Smyrna over the Boz-dagh, down to the Hermus valley. Before the opening of the railway which sweeps round the west foot of Mount Sipylus, all the traffic with the coast followed this route, which nowhere rises much more than 600 feet above sea level. Here are still visible numerous traces of an ancient highway, and in the neighbourhood of the road descending to the Hermus Valley a gray limestone cliff shows the bas-relief described by Herodotus as a figure of Sesostris, and now known as the Nymphi monument, so called from the neighbouring village of *Ninfi* or *Nif*, the site of an ancient nympheum. The rock has been much weathered, and many details of the armour and costume can no longer be recognised. Nevertheless it seems certain that this bas-relief never bore any hieroglyphic inscription, while its style has nothing in common with Egyptian art. Whether of Lydian, or possibly of Hittite origin, it betrays evidences of Assyrian influence. Conspicuous also in other pre-Hellenic bas-reliefs of Asia Minor. In 1875 the vestiges of a second "Sesostris" were discovered by Humann on a rock in the same valley.

Magnesia—Smyrna—Chio.

The modern *Manissa* (*Manser*), the old *Magnesia*, either of the Hermus or of Mount Sipylus, occupies a superb position at the foot of the steep cliffs separating it from the Gulf of Smyrna. But by the side of the picturesque Turkish quarter, which still retains its original aspect, a Greek Magnesia has recently sprung up, which threatens soon to outstrip its sleepy rival. About 5 miles to the east a recess in a rocky wall contains a somewhat decayed colossal statue, which has been identified by some with the Niobe of Homer, by others with the Cybele, mother of the gods, spoken of by Pausanias. In any case it seems to be one of the first tentative efforts of Hellenic statuary. The scientific term "magnetism" is derived from Magnesia, which was formerly noted for its rocks veined with loadstone.

Below Magnesia the only town in the Hermus Valley is *Menemen*, which lies at the point where the river escapes from the gorges and enters its alluvial plain. It may be regarded as an advanced suburb of *Smyrna*, the *Ismir* of the Turks, the great emporium of Asia Minor, which lies at the eastern extremity of the gulf of like name, where it covers a large space rising gently southwards along the foot of Mount Pagus, still crowned with the ruins of an ancient acropolis. But its position, much inferior to that of many other less vaunted Ionian towns, presents little to relieve the dull monotony of its general aspect, except when approached from the south. Here a good view is commanded of the Turkish quarter, spreading out with its domes, and minarets, and cypress groves between the hills and the gulf.

Next to Constantinople, Smyrna is the most populous, and next to Athens the most influential, city of the Hellenic world. In the port little is seen but European shipping, and all the quarters skirting the quays belong to the "Infidel." Here everything bears the stamp of Western enterprise. The quays paved with lava-blocks from Vesuvius, the English trams, Austrian carriages, houses built in the

French taste; bricks, marbles, piles, timber, and other materials have all been imported from beyond the seas. The stranger scarcely knows any other Smyrna except that of the Greeks and Franks, whence the Turks have been driven to the slopes of Mount Pagus. Here they occupy a labyrinth of wretched wooden houses, which would never be purified but for the fires which occasionally break out and

Fig. 133.—Smyrna.

Scale 1 : 35,000.

Cemeteries.

0 to 16 Feet. 16 to 32 Feet. 32 to 64 Feet. 64 Feet and upwards.

1,100 Yards.

make great gaps in their midst. Judging from the state of public instruction, there can be no doubt that the Greeks are rapidly acquiring the supremacy over their political rulers. Their college, which has long been protected by British influence from the jealous interference of the Turkish Government, occupies a whole quarter, and is still spreading. It possesses a constantly accumulating collection

of antiquities, and a large library of priceless value at this threshhold of Asiatic ignorance. The Armenians are also zealous in the cause of public instruction, and even the hitherto despised Jews are gradually rising in the general estimation, thanks to the energy they display in the education of their children. Many have substituted French for Spanish as the current language of social intercourse.*

The local industries are unimportant, and even the so-called "Smyrna" carpets come from the interior. Nothing is produced in the city and suburbs, except some coarse cottons, wicker-work, ribbons, and light silken fabrics interwoven with gold thread. The chief comestible is *halva*, a paste made of sesame-flour and honey, highly appreciated by Eastern communities condemned to frequent abstinence from flesh. Most of the exports consist of industrial and agricultural produce brought from the interior by the railways, which at the end of 1883 had a total length of 340 miles. These products—grapes, figs, cereals, oils, cotton, tobacco, opium, hides, dressed skins, carpets, and rugs—are exchanged for English cotton and linen goods, German cloth, Lyonese silks, brocades, hardware, and other manufactures of all sorts. The trade of Smyrna with Europe is increasing rapidly, having risen from about £3,000,000 in 1816 to £8,500,000 in 1882.

Fig. 134.—Isthmus of Vurlah.
Scale 1 : 400,000.

Of the summer retreats and health resorts in the neighbourhood of Smyrna, the chief are *Burnabat*, *Hajilar*, *Bunar-bashi*, *Kakluja*, all situated amongst the hills and valleys stretching east from the gulf. But amid all these new centres of population, where is the site of the ancient Smyrna, and

* Approximate population of the "nations" in Smyrna: subject Greeks, 90,000; Hellenic citizens, 30,000; Turks, 40,000; Jews, 15,000; Armenians, 9,000; Levantines and foreigners, 8,000; Total, 192,000.

where are we to look for the Meles, on whose banks Homer is supposed to have been born? The old traditions had placed this streamlet under the walls of Smyrna, and with each successive displacement of the city the name of the river was transferred to a new watercourse. Accepting this tradition, most travellers identify the Meles with the rivulet at present flowing to the north-east of the town

Fig. 135.—Strait of Chios or Chesmeh.

Scale 1 : 460,000

0 to 160 Feet. | 160 to 320 Feet. | 320 Feet and upwards.

12 Miles.

under the "Caravan" bridge, while others think that the true Meles was either the Kara-bunar, more commonly known as "Diana's Bath," or the torrent entering the roadstead at the north-east corner of the gulf.

Like the city of Homer, the ancient *Clazomenes*, birthplace of Anaxagoras, has almost entirely disappeared. It stood on an island in the outer gulf, which has now been converted into a quarantine station for shipping arriving from infected

SMYRNA—VIEW TAKEN FROM MOUNT PAGUS.

seaports. A causeway, now razed to the level of the water, had been constructed by Alexander, connecting the island with the mainland, at the point where now stands the small seaport of *Scala*, the outlet of the trade of *Vurlah*, which lies in a rich wine-growing country some 3 miles farther inland. On the south coast of the isthmus, to which Vurlah gives its name, the two towns of *Sevri-hissar* and *Sigajik* have also become important agricultural centres. About 1¼ mile south of Sigajik stand the imposing ruins of the Ionian city of *Teos*, birthplace of Anacreon. Within the ramparts, nearly 4 miles in circuit, may still be distinguished the remains of temples, of a theatre, and of the shrine of Dionysus, to whom the place was dedicated. On the same coast, but farther south-east, a few shapeless heaps mark the site of *Lebedos;* while almost every trace of *Claros* and *Colophon* has disappeared. This district, formerly thickly peopled and noted for a famous breed of horses, is now a wilderness, frequented only in winter by a few nomad pastors.

During Greek and Roman times Lebedos was much visited by strangers, for the sake of the neighbouring thermal waters, which are still utilised. Few regions are richer in hot springs than this peninsular district projecting between the Gulfs of Smyrna and *Scala Nova*. The most frequented are those of *Chesmeh*, at the western extremity over against Chio, and near the ruins of *Erythrea*. Chesmeh, that is, the "Fountain," in a pre-eminent sense, is memorable for the naval battle in which the Ottoman fleet was destroyed by the Russians in 1770. The high temperature of the springs in this district is attributed to the underground forces, which are still active in the whole peninsular and adjacent islands. By the terrific earthquake of October, 1883, over six thousand houses were demolished in Chesmeh, *Latzata*, *Ritra*, and *Reïs-dereh*.

The dilapidated appearance of the town of *Chio*, which stretches for some miles along the east coast of the island of like name, still bears witness to the disastrous effects of the earthquake of 1881, when the whole place was nearly destroyed, burying over 5,800 victims beneath its ruins. But such is the enterprise of its inhabitants, that they are already recovering from the calamity, as they had previously survived the still more frightful catastrophe of 1822, when, during the war of independence, 25,000 Chiots were massacred by the Turks, 45,000 carried off as slaves to Smyrna and Constantinople, and 15,000 driven to take refuge in the islands and mainland of Greece. Of 100,000 souls at that time inhabiting the island of Chio, not more than 2,000 survived to repeople this "Paradise of the Archipelago." The town of Chio, or *Castro*, as it is called, from the neighbouring Genoese castle, occupies a convenient position on the main route of vessels coasting the west side of Asia Minor. It thus serves as the advanced outport of Smyrna towards Athens and the West. It is continued north and south through the extensive suburbs of *Vrontados*, the shipping quarter, and *Campos*, the resort of its wealthy merchants. The Chiots have at all times been famous for their trading instincts, and their Greek kindred, jealous of their enterprising spirit, pretend that they are the descendants of an old Jewish or Phœnician colony. Nor can it be denied that the women especially betray a certain Semitic expression in the nobility and regularity of their features. Like the Jews, they keep aloof from strangers,

and even from the Hellenes of the neighbouring islands, intermarrying only amongst themselves, and manifesting the same clannish spirit in all their business relations. Although the island is not naturally very fertile, except in the glens and lowlands, its industrious inhabitants raise enormous quantities of fruits of all kinds, annually exporting from thirty-five to forty millions of oranges, forty to fifty millions of lemons, one hundred and twenty-five to one hundred and fifty million pounds of mastic, besides large quantities of raisins, grapes, figs, and other produce. A remarkable phenomenon of the local vegetation is the olive, which bears fruit only every two years, while the lentiscus or mastic-tree, elsewhere almost unproductive, here yields in abundance the precious gum or resin used in the

Fig. 136.—Chio—View taken after the Earthquake of 1881.

preparation of mastic. The only ancient monument still preserved in the island is a seat carved in the rock, about 5 miles north of Castro, supported by rude images either of lions or sphinxes. The Turks keep a garrison in the citadel, but take little part in the government of the island, which, like most others in the archipelago, is administered by an almost autonomous body of patricians.

Ephesus—Miletus—Halicarnassus.

South of the Smyrna hills the valley of the Cayster, or "Little Meander," terminating in the Ephesus marshes, comprises the little territory in ancient times specially designated by the name of Asia. It is still one of the most densely

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EPHESUS—RUINS OF THE AQUEDUCT AND CITADEL.

peopled tracts of Anatolia, comprising hundreds of villages, and the three important Turkish towns of *Oedernish*, *Tireh* (*Thyra*), and *Baindir*, which export to Smyrna the grapes, olives, figs, cereals, and other produces of the surrounding districts. West of Tireh, which is connected with the Smyrna railway system, lies the extensive *chiflic* of *Mashat*, presented by the Sultan to the French poet Lamartine, but never cultivated by him.

The city of *Ephesus*, at the issue of the Cayster Valley, has ceased to exist. Its now fever-stricken marshy plain is strewn with superb ruins, but entirely depopulated, except at the wretched hamlet of *Ayasuluk*, overshadowed by the broken arches of a Roman aqueduct. Originally comprising three distinct towns, Ephesus at one time covered a large space, its ramparts enclosing the steep slopes of the Koressos ridge as well as the isolated Mount Pion (Prion), while another bluff farther east was crowned by Hellenic buildings since replaced by a Turkish castle, former residence of the Ayasuluk sultans. This extensive area of about 2½ miles east and west is thickly strewn with magnificent remains, still attesting the power and splendour of the "Eye of Asia," capital of the Ionian confederation, religious metropolis of the Hellenic world, consecrated to the dread goddess, "Mother of Nature," and "Source of all things," who under the triple title of Anahid, Artemis, and Diana, ruled at once over Europe and Asia. After eight years of incessant labour, the archæologist Wood at last discovered, in 1871, the foundations of the Artemision, the great temple of Ephesus, lying over twenty feet below the surface close to the mosque of Ayasuluk, which itself stands on the site of a Christian church. The prodigious building, four times larger than the Parthenon, may now be reconstructed in imagination, with its rows of fluted and richly sculptured columns, with its groups of statuary and altars, whose fretted marbles still afforded glimpses of the neighbouring groves and wooded slopes. Some idea of this "seventh wonder of the world" may even be had from the admirable fragments removed to the British Museum. The remains lying on the surface had been partly utilised both for the construction of the aqueduct and, later on, for that of the mosque, an original and remarkable specimen of Turko-Persian art, which is embellished with verses from the Koran, disposed in marvellous arabesque designs. The foundations exposed on the slopes of Pion and Koressos also reveal the amazing wealth of sumptuous edifices grouped within the walls of Ephesus. Conspicuous amongst these was the theatre, which seated over twenty-five thousand spectators,* and which was followed by an uninterrupted line of temples reaching all the way to the harbour. The avenues were lined by thousands of statues, the materials for which were extracted from the vast quarries of Mount Pion.

As in all religious cities, every stone in Ephesus had its legend, while every prominent site on the surrounding hills was noted for some miraculous event. The Christians themselves, heirs of the Hellenic traditions, came to regard Ephesus as one of their holy places. Here were the "Prison of Saint Paul," the tomb of Mary Magdalene, or the cave where the "Seven Sleepers" slumbered with their

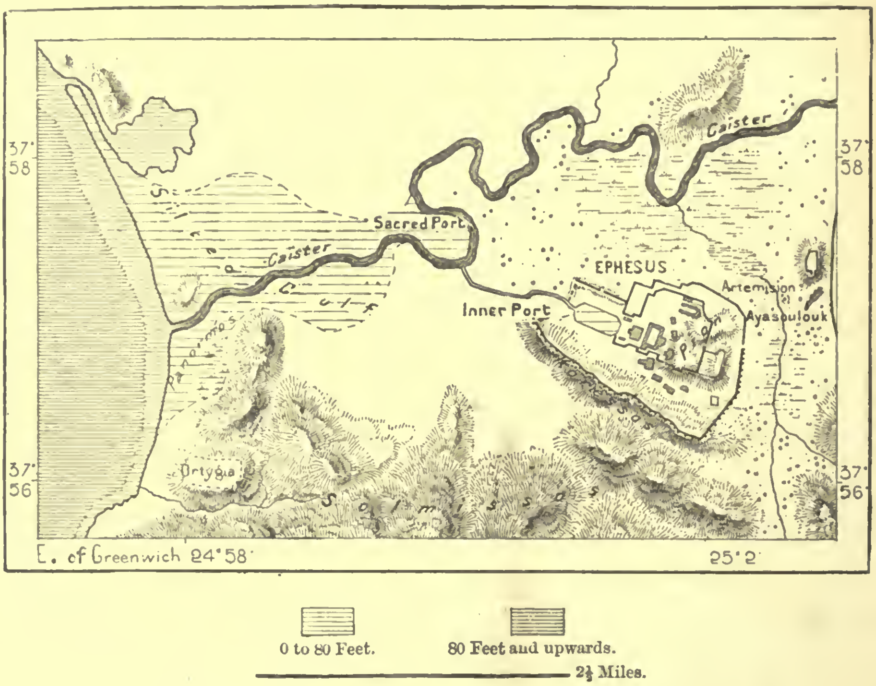
* Wood, "Discoveries at Ephesus." Falkner and other explorers had estimated the number of seats at 56,000.

faithful dog for two hundred years. Tradition also places at Ephesus the residence of the Apostle John, the "holy theologian," whence the name of the hamlet of *Haghios Theologos*, corrupted by the Turks into Ayasuluk. According to Heraclitus, the most illustrious Greek born in Ephesus was Apelles, of whom no work survives to justify his reputation in the eyes of posterity.

The two harbours formerly possessed by Ephesus have been completely filled in, and are now replaced by the port of "New Ephesus," better known by its Italian name of *Scala Nova*. Formerly much frequented, this place has fallen into decay since the opening of the Meander Valley railway, by which the produce of the whole district is forwarded direct to Smyrna. West of it, near the ruins of *Neapolis*, lies the Greek town of *Changli*, said to be the *Panionium* where the delegates of

Fig. 137.—Ephesus.

Scale 1 : 90,000.



all the Ionian cities came to deliberate on the interests of the confederation. Facing it is the island of Samos, of whose old capital nothing remains except a single column of the Hercion, the most venerated sanctuary of Hera in the whole of Asiatic Ionia. On its site now stands the little town of Tigani, or the "Shovel," so named from the shape of its port on the Strait of Samos, separating it from the Mycale peninsula. The surrounding plain is strewn with shapeless ruins, and under the hill of the acropolis near *Khora* has recently been discovered the double subterranean gallery, about 4,000 feet long, which supplied ancient Samos with water. This gallery is now being cleared out, and Tigani will soon receive an abundant stream of pure water through a tunnel excavated some two thousand four hundred years ago.

Vathy, present capital of the Samos principality, lies on the opposite side of the island, at the head of an inlet opening towards the north-west, and accessible for large vessels right up to the new quays. The town consists of three distinct quarters, the old *Palaio-Kastron* beyond the steep hill to the south, the city proper on the northern spurs, and *Kachuni*, the new district grouped round the harbour. Vathy does a large export trade in fruits, wine, and other produce. It is connected by a broad carriage-way with Tigani, on the east side of the island, which is rapidly becoming transformed by the spread of agriculture and gardening. The inhabitants enjoy an almost complete autonomy, being administered by a number of

Fig. 138.—Ephesus—Prison of St. Paul.

patricians under a prince nominated by the Porte, to which it pays a nominal yearly tribute of £1,900. It flies its own flag, and, thanks to the industry and frugal habits of the people, it is rapidly increasing in population and material prosperity. Thousands migrate yearly to Smyrna in search of employment, and the same movement is going on in the neighbouring islands of Nikaria and Patmos, the last of which has lost nearly half of its population since the middle of the century.

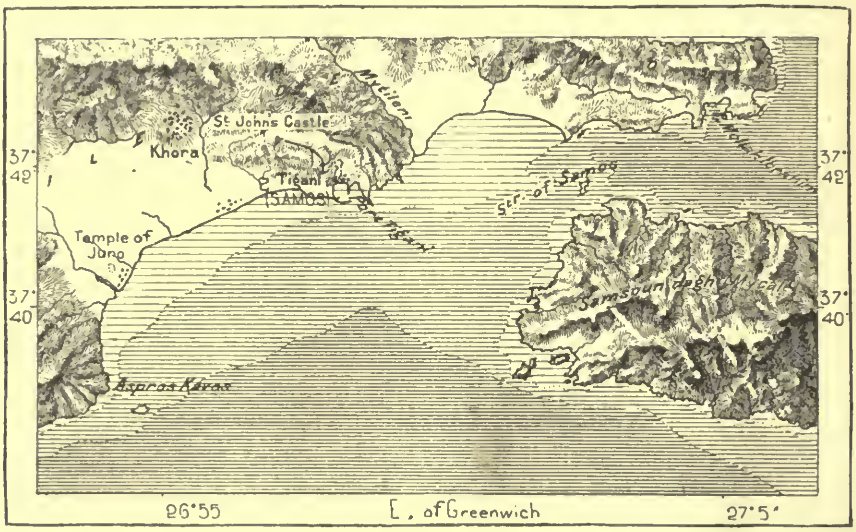
Dineir, at the head of the fertile Meander Valley, lies on the very threshold of the central plateaux, and, as the destined terminus of the Smyrna-Meander railway, must soon become the central mart for Phrygia and Pisidia. *Uchak*, lying on one of the headstreams of the Meander, in a district which grows the best opium in

Anatolia, is noted for the so-called "Smyrna carpets," of which the yearly export to England, France, and the United States is estimated at about £80,000. The cotton stuffs known in the market as *alajas* are chiefly woven by the women in the neighbouring Mussulman town of *Kadi-koi*, in the Lycus basin, between *Sarai-koi* and Denizli. About one thousand looms are employed at this place, and in order to increase the number of hands, nearly all the Turks of Kadi-koi take the four lawful wives permitted by the Koran.

Denizli, at the east foot of the Baba-dagh, has never recovered from the disastrous effects of the earthquake by which it was overthrown in the middle of the last century. North of it lie the imposing remains of *Laodicea*, one of the "Seven Churches of Asia," whose aqueduct, temples, and two theatres are now

Fig. 139.—Strait of Tigani or Samos.

Scale 1 : 200,000.



0 to 80 Feet. 80 to 160 Feet. 160 Feet and upwards.

6 Miles.

collectively known as *Eski Hissar*, or "Old Castle." Here are also found some traces of *Colossus*, at the village of *Khonas*, of *Aphrodisias* at *Geira*, and especially of *Hierapolis*, whose magnificent theatre is one of the best-preserved monuments of the time of Hadrian. On the opposite or northern side of the Meander Valley, Nazli is the chief centre of the so-called "Smyrna figs," whole forests of which are here cultivated for the export trade to the west. But the most important place in this region is *Aidin-Guzel-Hissar*, or simply *Aidin*, which gives its name to the vilayet of which Smyrna is the capital. Its yellow, green, and blue houses stretch for some miles at the foot and along the slope of the hills skirting the north side of the middle Meander Valley. Of its 32,000 inhabitants in 1883, 23,000 were Turks, 6,500 Greeks, 1,800 Jews and 1,000 Armenians. Here stood the ancient city of

Tralles, whose ruins have for centuries supplied their building materials to the inhabitants of Aidin.

In the lower Meander Valley the only place of note is *Sokia*, which has acquired some importance from its liquorice factories, and from the neighbouring lignite and emery mines. In this district are found some of the most precious remains of

Fig. 140.—Vathy.

Scale 1 : 60,000.

ancient art. The village of *Samsun* marks the site of *Priene*, whose temple of Minerva Polias was a masterpiece of Ionian architecture. At the wretched village of *Palatia*, some 12 miles farther south, stood *Miletus*, the renowned birthplace of Thales and Anaximander, of which little now survives except the remains of a theatre, the largest in Asia Minor. *Myonte*, on a bend of the Meander, north-east

of Miletus, has completely disappeared; but *Heraclea*, at the head of the old Gulf of Latmos, has preserved its agora, and at *Didyma* (*Hieronda*) are seen the ruins

Fig. 141.—Miletus and Didyma.
Scale 1 : 170,000.

of the sanctuary of Apollo Branchides, the largest and one of the most remarkable in Anatolia. This temple was connected with the nearest port by a road 2½ miles long, lined with seated statues recalling the Egyptian style.

The small Sari-chai, or "Yellow River" basin, also abounds in antiquities. Near the town which has given its name to the Gulf of *Mendelia*, the ancient *Euromus* shows the remains of a fine Corinthian temple; every house in *Melassa* (*Mylasa*) has been built of materials taken from old palaces, temples, and mausoleums; the tombs and cyclopean walls of *Iassus*, near *Asin-kaleh*, north of the mouth of the Sari-chai, have been utilised in the construction of a Venetian fortress, facing *Caryanda* on the opposite side of the Gulf of Mendelia. From this point an easy pass leads down to *Halicarnassus*, now *Budrun*, birthplace of Herodotus, on a deep

Fig. 142.—Budrun and Kos.

Scale 1 : 380,000.

and sheltered inlet lying between two headlands crowned respectively by a temple of Aphrodite and the famous mausoleum erected by Artemisia. After escaping the effects of repeated earthquakes, this stupendous monument was at last demolished by the knights of St. John, and the materials used to build a stronghold, which after all they failed to defend against the Sultan Soliman. In 1857—8 its site was revealed by Newton and Pullan, and some admirable fragments removed to the British Museum. It was the oldest monument in Anatolia, dating, according to Rayet, from the middle of the fourth century before the Christian era.

Of *Cnidus*, metropolis of the Dorian Hexapolis, which possessed a statue of Venus by Praxiteles, nothing remains except some tombs and cyclopean walls,

from which Mehemet Ali drew the materials for some of his Egyptian palaces. At present the chief mart of south-east Anatolia is *Kos*, at the eastern extremity of the island of like name, one of the richest in the archipelago. It exports excellent wines, onions, sesame, and supplies the Alexandrian market with grapes, lemons, almonds, pomegranates, and other fruits. Like Halicarnassus, Kos is commanded by a fortress erected by the knights of St. John. Here still flourishes a secular plantain 63 feet in circumference, beneath whose shade Hippocrates is traditionally said to have administered advice to his patients. Lying near the Nisyros volcano, Kos abounds in thermal springs, and its fertile soil is due to the igneous matter formerly ejected by that now extinct crater. Of Kalymnos, Astropalæa, Symi, and the other rocky islets in these waters, the chief resource are their sponge

Fig. 142.—Peninsular of Cnidus.

Scale 1 : 760.000.

fisheries, in which Symi alone employs over one hundred and sixty vessels of all sizes. All the Symiots are skilful divers, plunging fearlessly into deep waters infested by sharks.

Rhodes—Iconium—Mersina.

Rhodes, the "Land of Roses," or rather of "Pomegranates," as appears from the old coins, is one of the largest islands in the archipelago, where in some respects it occupies an exceptionally favourable position. Sheltered from the north-east winds by the Lycian highlands, unexposed to direct northern gales, while in summer enjoying cool marine breezes, its fertile valleys have the advantage of a more equable climate than any of the other Sporades. Rhodes is the "Bride of Helios,"

the "Abode of the Heliades," a land free alike from sunless days and leafless trees. Lying at the south-west extremity of the peninsula, it forms a converging point of all the marine highways in the Levant, whence the surprising extent of its com-

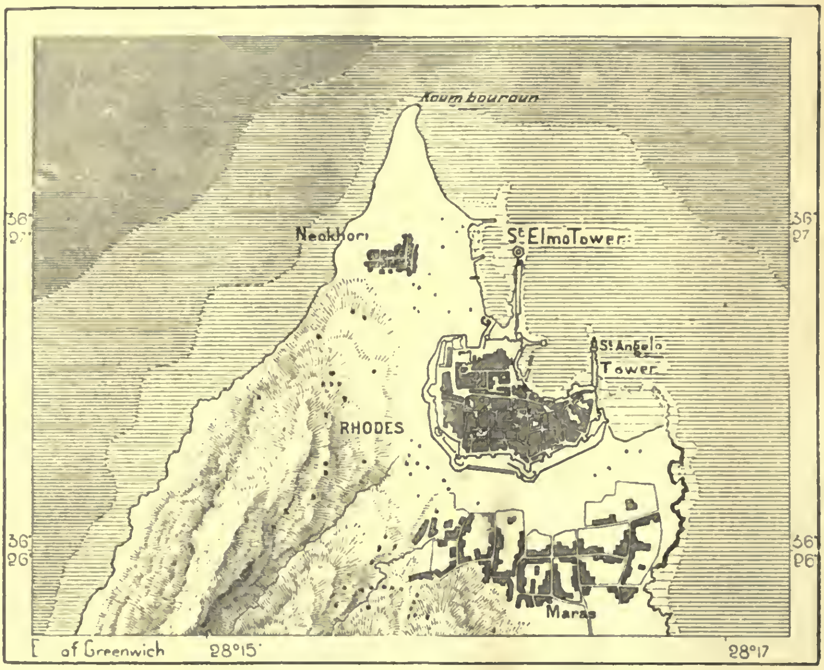
Fig. 143.—Port of Rhodes.

mercial relations in former times. In the third and second centuries of the old era the Rhodians were "the first navigators in the world." Heirs of the Phœnicians, who had planted colonies in the island, they founded trading settlements as far west as the Iberian peninsular, where their presence is still recalled by the town of

Rosas, and the Rhoda Mountains in the Pyrenees. They carried on a brisk trade with Sinope, which supplied them with corn from the Crimea, with slaves and fish, and the free navigation of the Bosphorus was at all times secured to their shipping by their friendly relations with Byzantium. The position of Rhodes was also one of vital importance strategically, and when driven from the mainland, the knights of St. John showed their sagacity in establishing their chief stronghold on a point of great natural strength at the northern extremity of the island. Here they stemmed the tide of Moslem invasion for over two hundred years, and in 1522, after a heroic resistance, at last capitulated to the forces of Soliman the Magnificent.

Fig. 144.—Rhodes.

Scale 1 : 43,000.



0 to 8 Feet. 8 to 160 Feet. 160 to 640 Feet. 640 Feet and upwards.

1,100 Yards.

The town still retains somewhat the aspect of a feudal city, although the church of St. John, the palace of the Grand Masters, and some other mediæval monuments were unfortunately destroyed by an explosion in 1856. Its three harbours have also been nearly obliterated, the central alone being still accessible to ordinary craft, but exposed to the dangerous north-east gales. On the east coast stands the now deserted port of *Lindos*, near the old Phœnician town of *Camiros*, where thousands of curious earthenware objects have been found.

Facing Rhodes on the mainland is the noble harbour of *Makri*, large enough to receive all the shipping of the Mediterranean. But Makri itself is a mere village

ISLE OF RHODES—LINDOS BAY.

on the site of the ancient *Telmessus*, of which important remains still survive. Some remarkable débris of Lycian architecture have also been found at *Xanthos*, which formerly crowned an isolated hill on the alluvial plain watered by the Œren-chai or Xanthus River. The tombs and bas-reliefs collected in 1836 by Fellows in this district now fill one of the rooms in the British Museum. Since

Fig. 145.—Valley of the Xanthus.

Scale 1 : [illegible]0,000.

that time dozens of old towns full of curious remains have been explored in the river valleys and along the coast of Lycia. Such are *Pinara*, now *Minara*, on a western affluent of the Xanthus; *Tlos*, near the left bank of the same river; *Patara*, to the west of Kalemaki Bay; *Phellus* and *Anti-Phellus* farther east; and in the Dembra-chai Valley *Giöl-bachi*, whose ancient name has not been determined.

The numerous Lycian inscriptions on the rocks and tombs of this region, although written in a character resembling the archaic Greek, have not yet been completely deciphered.

Of modern Lycian towns the most flourishing is *Elmalu*, in the closed basin of Lake Avlan-göl, which lies near the geometrical centre of the semicircle described by the Lycian seaboard between the Gulfs of Makri and Adalia. Elmalu is inhabited chiefly by Greeks and Armenians, with a Turkish quarter overlooked by a graceful mosque. It does a considerable export trade in morocco leather, skins, fruits, and dyes, chiefly through the seaport of *Pheniku* in Lycia, and *Adalia*, probably the *Attalea*, the city of Attalus Philadelphus, present capital of Pamphylia.

Fig. 146.—Chief Itineraries of Lycia.
Scale 1 : 800,000.

Sch.—Schonborn. D. & S.—Daniell & Spratt. B. & N.—Benndorf & Niemann. Tch.—Tchihatcheff. F.—Fellows.
30 Miles.

Lying in a rich agricultural district, Adalia carries on a considerable traffic, especially with Egypt. It is the natural outlet of the closed basins limited northwards by the Sultan-dagh, where are situated some industrial towns, such as *Buldur*, the ancient *Polydorion*, on the right bank of Lake Buldur; *Isbarta*, formerly *Baris*, on a rich plain watered by the headstreams of the Ak-su; *Aghlasan*, near the extensive ruins of *Sagalassus*, at one time one of the strongest places in Asia Minor; *Eghedir*, the Greek *Akrotiri*, occupying a picturesque position at the southern extremity of the lake of like name; *Bei-shehr*, on a stream flowing to lake Soghla-göl.

Konieh, the ancient *Iconium*, capital of Lycaonia, is strongly situated at the foot of the hills overlooking the plains south of the Great Salt Lake, on the main route between Syria and Constantinople. It is a decayed place, interesting only for its mediæval and ancient remains, amongst which the mosques dating from the Seljuk

period are specially remarkable for their exquisite arabesques and enamel work. *Zilleh*, lying to the north-west, is entirely inhabited by the Greek descendants of the old Hellenic population expelled by the Turks from Iconium. In the region stretching west of this point, where Davis has recently discovered some Hittite inscriptions, are *Karaman*, formerly capital of Karamania ; *Eregli*, *Kara-bunar*, and *Nigdeh*, near *Tyana*, birthplace of Apollonius, recently discovered by Hamilton.

Mersina, the chief seaport of Cilicia, has been partly built with the broken marble blocks of an older Greek city. Some miles to the west other remains indicate the position of Soli, where was spoken the barbarous Greek dialect whence incorrect expressions take the name of "solecisms." Farther on stand the Roman

Fig. 147.—Elmalu.

Scale 1 : 480,000.

12 Miles.

colonnades of *Pompeiopolis*, and the remarkable megalith known as the *Derikli-tash* a huge prehistoric block resembling the menhirs of Brittany, 50 feet high and weighing at least 300 tons. Mersina is connected by a good modern road with *Tarsus* and *Adana*, the former near the right bank of the Cydnus (Tarsus-chai), the latter in the fertile valley of the Sarus (Seihun). Tarsus claims a vast antiquity, and, according to a local legend, the plain on which it stands was the first left dry by the subsiding waters of the Deluge. In the time of Cæsar and Augustus it was the rival of Alexandria, and its schools were considered superior even to those of Athens. Mark Antony made it the capital of his Asiatic empire, but it was ruined by subsequent wars, and its harbour became choked with sand. Of its former greatness not a vestige now remains beyond a huge mound of potteries, consisting

chiefly of votive figures, and the Dunuk-tash, a huge square block of masonry nearly 300 feet long and about 26 feet high, the date and purpose of which have not been determined. A portion of the trade of Tarsus has passed to Adana, which is the natural outport of the Seihun and Jihun basins, and which occupies a vital

Fig. 148.—Albistan and Marash.
Scale 1 : 450,000.

position at the southern terminus of the historic route leading from the Upper Euphrates to the coast of Cilicia. The Seihun is also navigable to the quays of the city, which has a large export trade with Cyprus and Syria, and which is soon to be connected with Mersina by a narrow railway 36 miles long.

In the Upper Seihun Valley *Sar* or *Sarlereh*, near the new town of *Azizieh*, marks the site of the ancient *Komana*, or *Hierapolis*, whose temples, theatres, gymnasia, and other remains date from the Græco-Roman period, although mostly of an Egyptian rather than of a classical type. *Albistan*, sometimes known as *El Bostan*, or "The Garden," is the chief place on the Upper Jihun. It lies in a fertile well-watered plain cultivated by members of the Armenian Confederacy, consisting of six small republican communities, which from a remote time have maintained a semi-independent position in the neighbouring upland Zeitun Valley. *Marash*, also near the confluence of the Jihun and Aksu, is largely inhabited by industrious Armenians occupied with cotton-weaving and the preparation of cloth of gold and silver. The governor of the vilayet removes during the summer heats from Adana to this health-resort. *Sis*, in the same district, was a royal Armenian residence from 1182 to 1374, and is still the seat of a patriarch, whom the Turkish Government has set up as a sort of rival to the Catholicos of Echmiadzin in Russian Armenia.

Future Prospects of Anatolia.

Geographically, ethnologically, and historically a land of transition between Europe and Asia, Anatolia presents in its social and political condition a twofold movement of decay and progress, the prelude of inevitable revolutions. The Greek element is advancing, the Turkish receding; the seaboard cities are flourishing, those of the interior falling to ruins. Modern industry finds a genial home in Smyrna in close proximity to the camping-ground of nomad tribes, as destitute of material comforts as the Kirghiz of Central Asia; certain coastlands are as highly cultivated as the plains of Western Europe, while elsewhere whole districts are a prey to the brigand. Large landed estates are being developed, reducing entire populations to a state of disguised serfdom, and extensive tracts are at times wasted by frightful famines, such as those of 1874 and 1878. Nevertheless trade, the index of agricultural and industrial activity, is yearly increasing. The exportation of madder and raw silks has no doubt fallen off; but cotton, opium, and dried fruits have more than compensated the loss. At present Smyrna alone carries on a larger foreign trade than the whole of Anatolia at the beginning of the century.

Hence the balance seems decidedly to point at a general revival, which must tend to soften the sharp contrast now prevailing between the coast districts and the central plateaux. The locomotive is already beginning to compete with the 160,000 camels engaged in the peninsular caravan trade, and as soon as the interior is opened up by more accessible highways, the prosperity of the maritime regions must overflow to the steppes now occupied chiefly by a few Yuruk nomad tribes.

In the gradual work of transformation, to Smyrna rather than to Constantinople belongs the initiative. The railway which has its terminus at Scutari does not yet penetrate even into the Sakaria Valley, whereas the capital of Asiatic Ionia already possesses a network of lines extending eastwards into the Hermus, Cayster, and Meander basins, and creeping gradually up to the central plateaux. At the same time these lines, however useful in developing the local industries, can

have but a secondary importance in the future trade of the world. The great diagonal trunk line destined to connect India with Europe must necessarily pass through Constantinople. The English, however, although masters of India, are not interested in the construction of this direct line, which would be commanded by the batteries of the Bosphorus. Its completion would also have the immediate consequence of giving the Central European states the advantage in their commercial relations with the East. Hence the route preferred by Great Britain is that which, starting from some Mediterranean port facing Cyprus, would have its terminus on the Persian Gulf, that is, a basin commanded by her fleets. In any case, the commercial and industrial conquest of Anatolia is pregnant with

Fig. 149.—Railways opened and projected in Asia Minor.
Scale 1 : 11,000,000.

0 to 3,320 Feet. 3,320 to 6,640 Feet. 6,640 Feet and upwards.

Railways. Railways conceded. Railways projected. Roads projected.

240 Miles.

consequences affecting the political equilibrium of the world. In an administrative sense its unity may be regarded as already secured. The Sultan's authority is more firmly established than ever. Everywhere the vassal or semi-independent principalities of the *derebey*, or "Chiefs of the Valleys," have been suppressed, and the organization of all the vilayets is uniform, although the inhabitants are still far from being fused in one nationality. Every town in Anatolia has at least four or five, often as many as twelve or fourteen "nations," each of which maintains relations with its fellow-countrymen or coreligionists in the provinces. Is it too much to hope that all these conflicting elements may be moulded into one nation, without the violent scenes of slaughter and disorder attending the "renovation" of European Turkey under Russian auspices?

CHAPTER VIII.

CYPRUS.

CYPRUS, having a total area of three thousand eight hundred square miles, is the largest island in the Mediterranean next to Sicily and Sardinia. It belongs geographically to Asia Minor, from which it is separated by far shallower waters than those flowing between it and the Syrian coast. Its hills also run in the same direction as those of Cilicia. In its flora and fauna, however, it is allied rather to North Syria, while historically it is connected at once with both regions. Through the archipelago it was also brought within the sphere of Hellenic influences, and the religion, industries, and arts of the ancient Cypriots bear abundant traces of these various elements. But the people were sufficiently cultured to impart an original character to the germs derived from the surrounding lands. Easily accessible to the seafaring populations of Sidon and Crete, Cyprus was still too isolated to become a simple dependence of any of the neighbouring nations. From the earliest times its inhabitants appear as a people distinct from the other Hellenes. They possess a special dialect showing Æolian affinities, and even a peculiar writing system of a syllabic type, apparently related rather to that of the Hittites than to the Phœnician, unless it is to be traced to a cuneiform source.

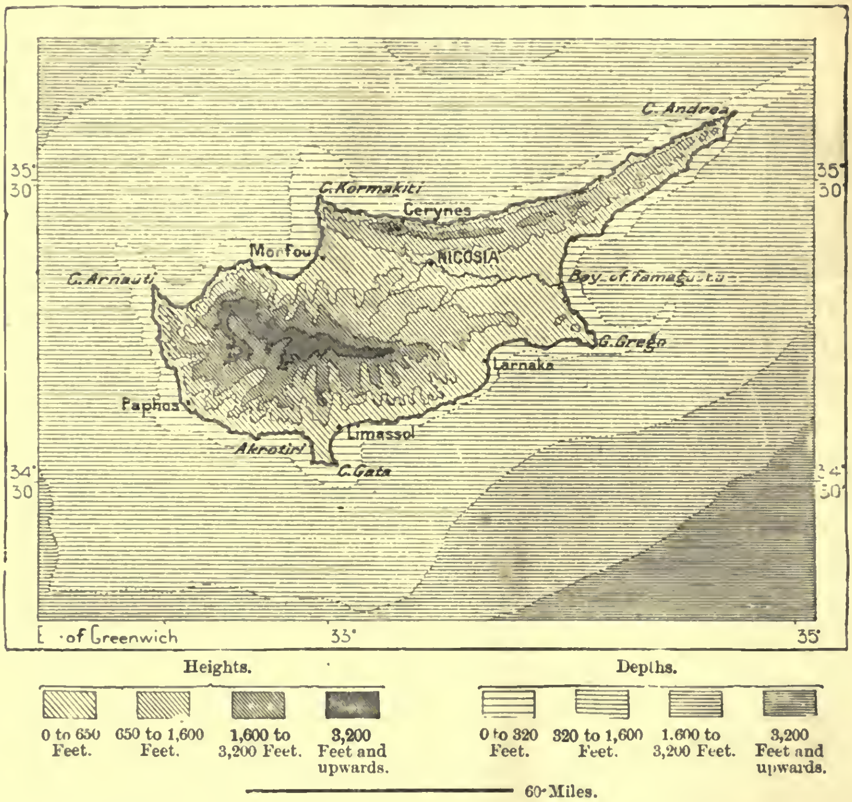
Politically also Cyprus often enjoyed a certain autonomy, and although subject successively to Egypt and Persia, it was never completely reduced by the great continental empires. Under Alexander it formed part of the Macedonian world, passing thence into the power of Rome and Byzantium. After the fall of Constantinople it became a separate kingdom, and for two hundred and fifty years it was ruled by the Lusignan family. From them it passed to the Venetians, who, after an occupation of a century, surrendered it in 1571 to the Turks. Since then it has continued to form officially a part of the Ottoman empire, although since 1878 it is "administered" by England. For a great naval power the position of Cyprus is of great strategical importance, lying as it does at the entrance of a bay whence it commands both the Anatolian and Syrian coasts, while its eastern extremity is directed towards the vital point of Hither Asia, that is, the great bend of the Euphrates, where all the main routes converge from Syria, Armenia, the Euxine,

and Persian Gulf. But the island is still too destitute of resources to be otherwise a valuable acquisition, and for many years must remain a burden on the imperial revenue. Roads, harbours, dockyards, fortresses, and arsenals have all to be restored, and the topographical survey has only just been begun.

Mountains and Rivers.

The chief mountain mass of the Olympus, now more generally known as the Troodos, attains in the south-west an altitude of about 6,600 feet, and is streaked with

Fig. 150.—Cyprus.
Scale 1 : 2,800,000.



snow for the greater part of the year. East of the culminating point other peaks, such as the "Two Brothers," and "Makheras," rise to heights of 4,000 and 5,000 feet, while the headland of Stavro Vuno (Santa Croce), although only 2,300 feet high, owing to its isolated position on the most frequented part of the coast, was long regarded as the true "Olympus." Here formerly stood a famous temple of Venus, since replaced by a Benedictine monastery. The eruptive rocks of this system, bursting through the Tertiary limestones and marls at their base, have variously modified the lower strata, and on both sides are found mineral deposits, especially copper, which bears the name of the island. Iron mines also occur here and there, but like those of copper, all have long been abandoned.

The northern part of the island, terminating north-eastwards in the long peninsular of Karpasos, the "Ox-tail" of the ancients, is completely filled by a range of mountains quite distinct from the south-western highlands. Cyprus, in fact consists geologically of two islands, separated by an old marine channel now forming the plain of Mesaria (Mesorea), the Makaria, or "Happy" of the ancients. The northern chain forms a crescent nearly 100 miles long, but very narrow, and running close to the coast. It culminates towards the western extremity in Mount Elias, about 3,400 feet, falling to 2,000 feet in the Kantara peak at the neck of the Karpasos peninsular. To the whole range Gaudry has given the name of Cerines, from the town at the northern issue of the only carriage-road crossing it. This pass might easily be held by a handful of resolute men against a whole army.

The Pedias, the largest river in Cyprus, flows from Olympus for over 60 miles north-eastwards to the Gulf of Famagusta. But notwithstanding its numerous affluents it is not a perennial stream, being almost completely dry in summer. The few lakes also are mere saline lagoons without any outflow, mostly old bays or inlets now separated by sandy strips from the sea, such as those of Larnaka and Limassol, which annually yield from twenty five to thirty thousand tons of salt. For agricultural purposes the perennial springs at the foot of the hills or in the upland valleys are of more impotance than the so-called "rivers," and many towns owe their origin to such sources of supply. They are less abundant in the central highlands than in the northern coast range, where all take their rise between the altitudes of 500 and 700 feet. To explain their existence in such a comparatively arid region the natives suppose that they flow from the Cilician highlands in submarine channels across the intervening strait at a depth of over 1,000 feet below the surface of the Mediterranean. From this source is fed the canal, 9 miles long, which supplies Larnaka.

Climate—Flora and Fauna.

Owing to its position between the Syrian and Cilician hills, the climate of Cyprus is continental rather than maritime. In winter it is exposed to the cold winds from the Anatolian plateaux, causing snow to fall even on the plains. The rainfall is abundant, especially during the three last months of the year, when the rivers overflow their banks and often interrupt the communications. But the change is very sudden from winter to summer, when the sky remains cloudless for months together, vegetation becomes burnt up, and the temperature rises at Larnaka to 90° F. in August. During this season malaria about the lagoon districts on the coast is very prevalent, and the plains to the foot of the hills are wrapped in dangerous exhalations. At times the winds from the mainland waft across the sea swarms of locusts (*stauronatus cruciatus*), which settle on the northern coastlands and devour all green things. Till the middle of the present century the island was wasted by this scourge about once every two years, but since then precautions have been taken, by which the evil has been greatly abated.

The local flora is very rich, comprising over one thousand phanerogamous

species, and including nearly all the plants of Crete and the archipelago, as well as many others belonging to the neighbouring continent. But there are only four indigenous, amongst which is the "alder-leafed oak." The most common forest-tree is the Caramanian pine; and the cypress, which takes its name from the island, still grows wild in the eastern districts. The *kopher*, from which according to some authorities Cyprus has been named, seems to be either the *lawsonia*, from whose leaves hennah is extracted, or the *cistus creticus*, which flourishes between the altitudes of 2,000 and 5,000 feet, and which distils the ladanum balsam, an odoriferous resin highly esteemed by the ancients.

Wild animals have almost entirely disappeared. The *ovis cyprius*, or Cyprian mouflon, is still met in the rocky uplands; wild cats are numerous in the forests, and the wild boar and venomous snakes infest the plains. The western districts about Cape Epiphani are said to be frequented by horses, asses, and oxen which have reverted to the wild state. Since the British occupation game is protected by a tax on hunting.

Inhabitants.

The inhabitants of Cyprus comprise the most diverse elements—Greeks, Turks, Syrians, Arabs, and others—from the surrounding lands. They are grouped not so much according to race as according to speech, and especially religion. The Greeks, constituting four-fifths of the population, are all Cypriots speaking the peculiar local Hellenic dialect and conforming to the rites of the orthodox Church. All Mohammedans, even those of Cypriot speech, are classed as Turks; and the so-called Linobambaki form an intermediate group, outwardly Moslem, but who baptise their children, and in the family circle call themselves Christians. As elsewhere in the Levant, the Greeks constitute the active element, although by their Hellenic kindred regarded as of a somewhat dull and passive type. The Cypriots have never taken part in the patriotic movement of the other islanders, preferring to live peacefully, and yielding ready obedience to their successive Mohammedan and Christian rulers.

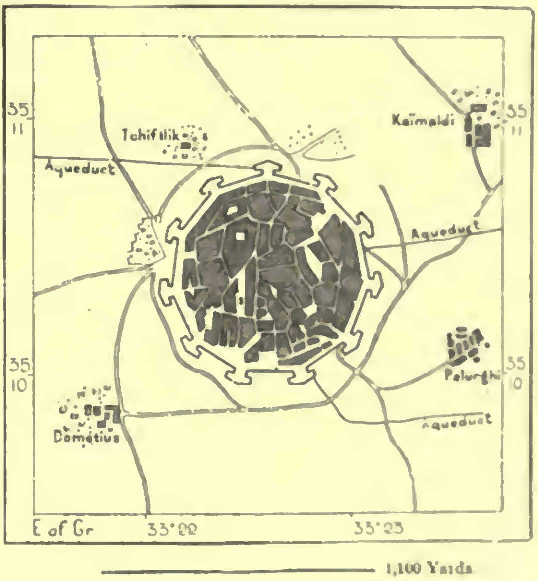
Formerly the Maronites were numerous in the northern districts, where they founded several settlements on the slopes of the coast range, and especially in the Karpasos peninsula; but the great majority have gradually been assimilated to the Hellenes, while others have become Mohammedans. But a Maronite community of about 500 souls still survives in the Kormakiti promontory, at the western extremity of the Cerines range. A few thousand negro slaves, introduced at various times, have merged in the Moslem population, while the Armenians, Levantines, Jews, and Europeans of every nation who have immigrated since the British occupation, remain mostly speculators rather than colonists. But they have hitherto done little to increase the resources of the island. Agriculture and the industries are in the same rudimentary state as under Turkish rule, and nine-tenths of the soil still remains untilled. Cotton, sugar, dates, wine, and other produce have greatly fallen off since the Lusignan and Venetian epochs. The

whole island, to an altitude of 4,000 feet, might be converted into a vast vineyard yielding magnificent vintages, whereas the present annual production never exceeds 550,000, and sometimes falls to 350,000, gallons. Next to wine, cereals, and olives, the chief agricultural product is the carob-bean partly exported to Russia and partly used in the local distilleries. The whole annual trade of the island varies at present from about £420,000 to £600,000.

TOPOGRAPHY OF CYPRUS.

Leukosia, or *Nicosia*, capital of Cyprus, is strongly situated on a slight eminence in the Mesorea plain, at about equal distances from Morfu bay in the west and Famagusta and Larnaka in the east. It thus forms the natural centre of the two maritime zones, and also communicates easily with the north coast through the pass over the Cerines range. Its Venetian wall, a regular polygon about 3 miles in circuit, and flanked by eleven bastions, is still in a good state of repair, but the English garrison is encamped on the slopes of the neighbouring Mount *Machæra*, above the fever zone. The village of *Dali*, where formerly stood the country seat of the Lusignan kings, marks the site of the ancient *Idalium*, which has yielded some Cypriot inscriptions, besides the famous bronze tablet now in the Paris National Library, and the bilingual Phœnician and Cypriot monument which gave George Smith the key to the local dialect. Here also M. de Cesnola explored over fifteen thousand tombs of the vast necropolis, which yielded a magnificent collection, now in the New York Metropolitan Museum. Other treasures have been recovered from *Athieno*, farther west, where stood the temple of Aphrodite Golgia, in former times visited by pilgrims from every quarter.

Fig. 151.—NICOSIA.
Scale 1 : 55,000.



The harbour of *Kerynia* (*Ghirneh* or *Cerines*), the northern seaport of Nicosia, is now a mere creek some 10 or 12 feet deep, overlooked by the picturesque castle of the Lusignan sovereigns. Other Lusignan strongholds crown the neighbouring heights, and some of the rocks near the ancient *Lapethos* and the modern convent of *Akteroperithi* have been excavated within and without, so as to form gigantic towers with inner galleries and terraced palaces.

During the Hellenic period, the chief port on the east coast was *Salamis*,

whence the Venetians drew the blocks of stone used in erecting the formidable ramparts of *Famagusta*, the ancient *Amakhostos*, that is, *Amta Khadasta*, the " Great Goddess " of the Assyrians, some 5 miles farther south. The citadel of Famagusta is little more than a picturesque ruin ; but the town walls are as intact as on the day when, in 1571, the Venetians capitulated to the Turk. The harbour has silted up ; but north of it stretches a roadstead over a mile long, sheltered from the east by a chain of reefs and sandbanks running parallel with the coast. This

Fig. 152.—Larnaka and Famagusta.
Scale 1 : 600,000.

0 to 32 Feet. 32 to 320 Feet. 320 Feet and upwards.

12 Miles.

anchorage, which has a mean depth of 50 feet, is probably destined to become in British hands a second Malta in the Levant.

Larnaka, which at present almost monopolises the foreign trade of the island,* consists of two distinct towns, the Marina, or new quarter, fringing the beach, and the old quarter, over half a mile farther inland. Southwards stretch the extensive lagoons or salines, which yield a large and almost inexhaustible supply of salt. The old Greek port has almost completely disappeared, and the shipping now anchors in the roadstead. Marina stands on the site of the old Phœnician town of *Kittini*, or *Kition* (*Citium*), where was found the precious Assyrian bas-relief of

* Shipping of Larnaka, about 200,000 tons yearly ; exchanges, £600,000.

King Sargon II. For centuries Kittini was regarded as a Syrian city, whence Zeno, a native of this place, is spoken of by Cicero as a "Phœnician."

Limisso, or *Limassol*, on the semicircular beach terminating southwards at Cape Gatto, ranks as the second seaport in the island. Its exports consist chiefly of salt, grapes, raisins, brandy, and the famous Kolossi wine, of a total yearly value of about £160,000. *Palæo-Limisso*, about 8 miles farther east, stands on the site of *Amathos*, or *Amathonæ*, the Phœnician *Hamath*, where Astarte and Melkart were

Fig. 153.—Kerynia.

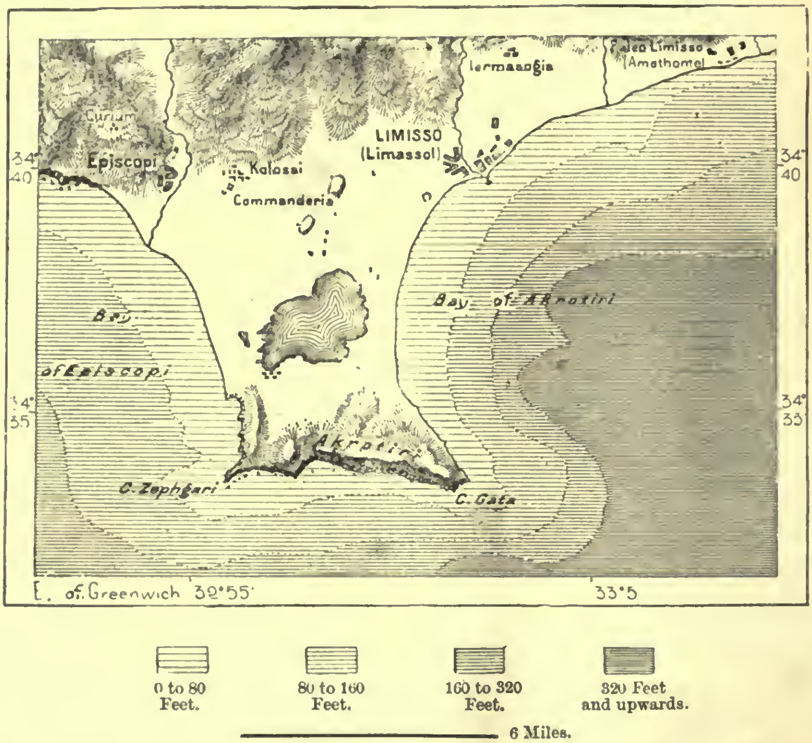
worshipped with human sacrifices. The ancient *Curium*, lying on a rocky eminence west of the Akrotiri headland, almost unknown till the year 1870, has since then yielded the most intrinsically valuable as well as the most artistic treasures in the whole island. Here Cesnola has found a perfect storehouse of costly Assyrian, Egyptian, Phœnician, and Greek objects, some imported by traders, others evidently fabricated on the spot. Yet still more extensive treasures had formerly been accumulated in the district of *Paphos*, on the south-west coast. Of the ancient

temple of Venus, which stood on a lofty eminence visible far seawards, little remains but a few fragments. But the surface is in some places strewn with sculptured blocks, broken walls, tombs, and underground openings. The village of *Bafa* (Papho) on the coast is even still visited by the Cypriot women, and although the sea-foam is no longer consecrated to Venus, the sea itself ranks with St. George and St. Lazarus as a chief patron of the island.

In virtue of the treaty concluded in 1878, England undertakes the exclusive administration of Cyprus, handing over to the Porte a yearly sum of about £90,000. The revenue varies from £160,000 to £200,000, and in 1882 the expenditure amounted to £300,000. The English commissioner has full powers, although

Fig. 154—Limassol and Akrotiri Peninsular.

Scale 1 : 290,000.



assisted by a council of eighteen, six chosen by the Government, and twelve elected by a limited suffrage. Of the latter nine are Christians, three Mohammedans, and English and Greek are the official languages. The Porte retains the waste lands and forests, that is, over three-fourths of the island ; but the British Government enjoys the right of forced purchase, while on the other hand engaging to restore Cyprus to Turkey when the Russians retire from their recent conquests in Armenia. Meantime they hold the island with a garrison of 600 men.

The Archbishop of the Cypriot Church is independent of the patriarch of Constantinople, and enjoys a large income, while the rural clergy are mostly so poor that they are obliged to support themselves by manual labour.

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CHAPTER IX.

SYRIA, PALESTINE, SINAI.

THE narrow zone of habitable land skirting the eastern Mediterranean seaboard between the Gulf of Alexandretta and Egypt, forms a well-limited geographical region. East of the Aleppo basin the frontier is distinctly marked by the course of the Euphrates, and east of the Dead Sea an arid mountain barrier merges southwards in an almost uninhabited wilderness, terminating in a regular triangle between the two gulfs of Akabah and Suez. But the whole region, which stretches from the Amanus to Sinai for about 600 miles north and south, with a mean breadth of 90 miles, is itself divided into several sections, differing in their relief, climate, and historic evolution. Such are in the north the basin of the Orontes, in the centre the Jordan Valley and conterminous lands, in the south the Sinai peninsular.

Historic Retrospect.

A great rôle in the history of mankind has been played by the sections comprising Syria and Palestine, which lie between the sea and the desert, and which are traversed by the natural routes connecting the Nile and Mesopotamian basins. In remote ages, when these regions enjoyed a more abundant rainfall, more easy and direct communications may have existed between the Persian Gulf and the Nile delta. But throughout historic times the space lying between the Lower Euphrates and the Trans-Jordan highlands has been a wilderness intersected only by intermittent streams and inhabited exclusively by nomad tribes. A semicircle of arable tracts and towns sweeps round the sands and steppes from Bagdad to Damascus, and this direction has been followed by all the great movements of the surrounding peoples.

The importance of the Syrian coast as an overland route was soon enhanced by its commercial supremacy on the high seas. From the remotest times the Phœnicians appear as great navigators, a fact which has tended to obscure their essentially agricultural character. Yet Canaan is described as a land "flowing in milk and honey," and it was to find markets for their superfluous produce that the Tyrians and Sidonians turned their attention to navigation. Their grandest

architectural remains are monolithic wine and oil-presses, cisterns, millstones, reservoirs for water, oil, or corn hewn out of the live rock. Later on came the great hydraulic works, artificial harbours and breakwaters, of which scarcely a vestige is now to be seen. The form of the coast, where once flourished the famous cities of Tyre, Sidon, Berytus, Byblos, Aradus, has been modified by the silting sands, or possibly by changes of level. Nevertheless, after a lapse of three thousand years some of these Phœnician seaports have again become busy commercial centres.

Their maritime supremacy once established, the Phœnicians soon monopolised the carrying trade of the East. The Mesopotamian nations necessarily forwarded their wares through the Syrian ports, and Egypt herself, possessing no timber for the construction of vessels, was fain to effect its exchanges by means of her Phœnician neighbours. The merchants of Tyre and Sidon jealously preserved the magnificent cedar forests which supplied them with building materials. They also carefully preserved the secrets of their distant discoveries, and the true source of the metals, amber, ivory supplied by them to the eastern potentates long remained unknown to the ancients. On the other hand, by disseminating a knowledge of letters, they constantly enlarged the circle of civilisation of which they were the centre. Even the tribes of Israel, although confined to the interior, contributed by their migrations to the diffusion of culture throughout the narrow zone of the Syrian seaboard. Reaching Palestine from Egypt, and transplanted thence to Babylonia and the Iranian uplands, the Jews reflect in their genius the characteristics of the peoples amongst whom they sojourned. As traders settled in every part of the Mediterranean world, they participated in the commercial inheritance of Tyre and Sidon. In the same way Græco-Roman influences have been superimposed on those of Egypt, Chaldæa Persia, and Arabia; and although the geometrical centre of Europe, Asia, and Africa lies beyond the limits of this region, no other land of transition is more important in the historic evolution of the Mediterranean peoples than the highway whose chief stations are Damascus and Jerusalem.

In the history of religious thought Jerusalem takes a pre-eminent position. Towards Golgotha the Christian turns to worship a crucified God; the country formerly inhabited by the twelve tribes is a "Holy Land;" Nazareth and Bethlehem, Lake Tiberias and Mount Tabor, the Pool of Sichem and Mount Olivet are in their eyes the most hallowed spots on earth. Here they seek the origin of their cult, and here they look forward to the appearance of that "New Jerusalem" in which human suffering shall cease to be. Yet the Christian system, which had never taken firm root in the land of its birth, rapidly disappeared before the advance of Islam, and the protracted efforts of the crusaders to rescue the Holy Land from the grasp of the "Infidel" ended in failure.

Like the other provinces of Asiatic Turkey, Syria is a land covered with ruins, on whose sites no new and flourishing cities have arisen. The wilderness has encroached on the arable zone, and even the most frequented highways have now to traverse many solitudes. Nevertheless a great part of this region has been

completely explored from the geographical standpoint. The whole of Palestine, for a space of 6,000 square miles this side Jordan, has been trigonometrically surveyed, and the work of the English cartographists is now being extended to the land of Moab east of that river. Three-fourths of the old names occurring in the Bible, in Josephus, and the Talmud have been identified, and most even of the Canaanite terms preceding the Israelitish settlement have been recovered. By means of the Karnak hieroglyphics Mariette has been enabled to map out the land of Canaan at the period of the battle of Meghiddo, fought over 3,700 years ago.

Fig. 155.—Passes of the Amanus.

Scale 1 : 260,000.

In the north the Libanon has also been carefully studied by the French expedition of 1860 and 1862, and the surveys are advancing along the lines of the projected railway towards the Euphrates.

With the exception of a few valleys in the Libanon, no part of Syria can be said to be adequately peopled, regard being had to the fertility of the soil. The whole population of the region stretching from Cilicia to Sinai, which three thousand years ago supported at least ten million inhabitants, seems at present scarcely to exceed a million and a half.

MOUNTAIN RANGES.

The Akma-dagh (Amanus) range, which rises immediately south of Alexandretta Bay, may in many respects be regarded as forming part of the Anatolian orographic system. It is attached to the Ghiaur-dagh by a hilly plateau containing the Ghiaur-göl, or "Lake of the Infidel," and its mean direction is north-east and south-west, parallel with the Cilician Taurus and the Anti-Taurus. Its highest peaks scarcely exceed 6,500 feet, but its seaward slopes are very steep, and the coast route is carried over precipitous spurs forming headlands along the seaboard. At Portella, north of Alexandretta, the remains of a white marble gateway at the entrance of a defile, enlarged to a carriage-road by Justinian, are locally known as the "Pillars of Jonah," this being the spot where, according to the local legend, the Prophet was cast ashore by the "great fish." Farther south the rugged Amanus and its southern continuation, the Jebel Musa, are avoided by the main route, which runs directly through the Beilan Pass, or "Syrian Gates," down to the plains of Antiochia. This extensive tract, through which the Orontes winds seawards, is the true portal of Syria, whose geographical limits are here clearly marked by the river, the Lake of Antiochia, and its eastern affluents.

South of Antiochia the Ansarieh hills culminate in the pyramidal Jebel-Akra, or Casius (5,900 feet), at the mouth of the Orontes. This was one of the sacred mountains of the Phœnicians, and for the Greeks another Olympus, whence Jove contemplated the advancing dawn in the east, while the western world was still wrapped in gloom. Southwards the gently undulating chalky crests of the Ansarieh range fall in many places to a height of 3,000 feet, but are everywhere of difficult access, owing to the countless gorges intersecting them in all directions. Eastwards they are separated by the Orontes from the hills fringing the desert, while their southern extremity is skirted by the Nahr-el-Kebir, rising like the Orontes on the eastern slope of Libanon.

THE LIBANON AND ANTI-LIBANON.

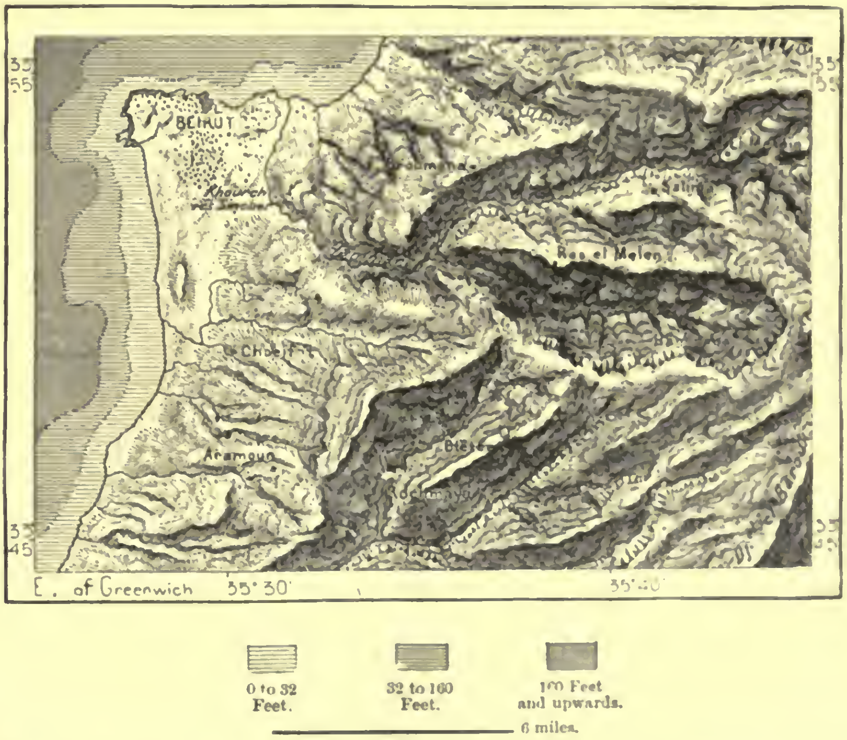
South of the Nahr-el-Kebir Valley begins the lofty coast range of the Libanon, which runs uniformly north-east and south-west, parallel with the Jebel-esh-Shark, or Anti-Libanon, from which it is separated by the intervening plains of Cœle-Syria. The long unbroken crest of Libanon, blue in summer, silvery white in winter and spring, presents an imposing aspect seawards, the atmospheric vapours lending to the distant hills an aërial transparency and softness, to which solidity is added by their bold outlines and rugged slopes. A near view is less pleasing, the long barrier presenting in its entire length of some 90 miles nothing but yellow treeless summits and monotonous valleys. In the extreme south the valleys are more fertile and better tilled, and here the traveller occasionally meets a few picturesque landscapes, especially in spring, when the higher elevations are still glittering with a pink or white glint in the solar rays.

The Libanon highlands consist mainly of dolomites, coarse limestones, marbles,

sandstones, and marls, pierced at innumerable points, without being disturbed, by protruding basalts. The cliffs are broken by profound crevasses running mostly north and south, or east and west, and breaking the system into a number of distinct groups. This disposition of the uplands explains the relative independence maintained by their inhabitants. In the very midst of a Mussulman land the Libanon highlanders have for centuries preserved their national religion almost unmodified. Nor had they any mineral treasures to tempt the greed of foreign conquerors.

Libanon is in Hebrew synonymous with "Milk," that is, the "White Mountains," although nowhere reaching the zone of permanent snows. The loftiest peak at the northern extremity scarcely exceeds 10,600 feet, and not more than

Fig. 156.—Beirut Hills.
Scale 1 : 300,000.



three others rise to 10,000 feet. The great carriage road constructed by a French company between Beirut and Damascus attains 6,000 feet, and the mean elevation is slightly inferior to that of the Pyrenees. But the higher temperature explains the relatively small extent of the snowfields and the present absence of glaciers. The limestone rocks are pierced by caverns, some running for miles into the heart of the mountain, and containing animal remains as well as traces of human habitations. The slopes facing eastwards are far more arid and destitute of springs than the opposite side, which receives a considerable amount of moisture from the Mediterranean. Here the climate and vegetable zones are distinguished by special names. Thus the coast region, the Canaan of the Hebrews, is known as the Sahil,

a narrow fertile strip, where stood the great trading cities of Phœnicia. Above it stretches the Wusut or middle zone, less densely peopled but still studded with villages, and yielding crops of tobacco, cereals, and potatoes. The Wusut, which in some places is clothed with conifers and other forest-trees, is succeeded about the altitude of 4,000 feet by the Jurd, a barren upland region exposed to fierce gales and avalanches. Cultivated tracts occur in the sheltered dells and basins as high as 6,500 feet, and here and there occur clumps of gnarled oak, the turpentine-tree, wild pear, and juniper often attaining a gigantic size. In this upper region grow the famous cedars, at an altitude of over 6,500 feet near a pass south of the Jebel-Makmal. Formerly a glacier descending from the surrounding height filled a

Fig. 157.—The French Road.

Scale 1 : 1,800,000.

0 to 80 Feet.

80 to 320 Feet.

320 Feet and upwards.

12 Miles.

cirque at this spot, and the roots of the cedars lie embedded in its terminal moraine. Since the sixteenth century, when they still numbered twenty-five, the really gigantic specimens have been reduced to five, surrounded by a few hundreds of moderate size.

Eastwards the Libanon falls in abrupt escarpments down to the longitudinal valley of Cœle-Syria, or "Hollow Syria," which forms the most regular section of the depression running north and south from the Lake of Antiochia to the Dead Sea and Gulf of Akabah. The Bekaa, or "Mulberry Valley," as Cœle-Syria is now called, has a double slope, draining northwards through the Orontes, southwards through the Leontes, or Nahr-el-Leitana, the almost imperceptible water-parting standing at an elevation of 3,900 feet, while the mean elevation of the valley may

MOUNT HERMON—VIEW TAKEN FROM RASHEYA.

be estimated at about 3,000 feet. It is strewn with marshes, remnants of an old lake, which formerly flooded the space between Libanon and Anti-Libanon.

The Anti-Libanon presents on the whole a remarkable analogy to the parallel western range. Composed of the same limestone rocks, covered with the same red soil of glacial origin, it is equally arid and bare in its northern section, equally varied with fertile tracts southwards. The Sheikh-el-Jebel, its highest point, also faces the culminating point of the Libanon; and although its mean altitude is about 1,000 feet less,* it is distinguished even by more picturesque outlines, bolder crests, more savage gorges, more vivid tints, and striking contrasts. In the eastern range, however, it is not the cedar or pine, but the poplar, which enriches every hamlet in this otherwise almost treeless region. Eastwards the Anti-Libanon falls in terraces towards the desert, and in the south it is intersected by the deep valley of the Barada. Just below this point the range is crossed at an elevation of 4,330 feet by the French route connecting Damascus with the coast at Beirut.

Hermon—Hills of Galilee—Mount Carmel.

The broad opening utilised by this route separates Anti-Libanon from Mount Hermon, which may almost be regarded as its southern prolongation. Like Libanon, Hermon is a holy mountain, where Christian shrines have everywhere replaced the old pagan sanctuaries, Elias, Jonah, or Saint George thus succeeding to the Baal, Adonis, or Eliun of the ancient Semite peoples. The mountain itself was a god, and all the temples of the surrounding district are found to face its chief summit, which rises in three peaks 9,400 feet above the Mediterranean. Of all the Syrian mountains, Hermon is the most densely wooded, groves and even small strips of forest clothing its basalt slopes. Some 60 miles south-east of Hermon stands the volcanic Jebel-Hauran, whose highest crest has an elevation of 6,170 feet. Its main axis runs nearly due south and north, terminating in this direction in rugged escarpments surmounted by the Tell-abu-Tumeis (5,320 feet). Within a space of 6 miles are grouped four other extinct cones, whence formerly flowed the vast lava streams of the Argob north-westwards, in the direction of Damascus. The thickness of the molten masses overlying the marls and limestones, the Leja, as this district is now called, has been estimated at 600 or 700 feet.

The Safa, or "Naked Mountain," is another group of extinct volcanoes, lying on the shore of the old lacustrine basin which skirted the east side of the Syrian uplands. The dreary and savage region covered with the black lavas ejected from these cones well deserves the name of Trachonitis, or the "Rugged," given to it by the ancients. It seems to have undergone little or no change since the time when the burning masses cooled down into all sorts of strange and fantastic forms. In its widest extent the Safa covers an area of some 500 square miles, its cones rising 1,500 to 2,000 feet above the surrounding plains, and 3,500 above sea level. Some

* Chief Summits of the Libanon and Anti-Libanon:—

Timarun	10,600 feet	Sheikh-el-Jebel	8,900 feet.
Muskiyah	10,250 „	Halimat-el-Kabu	8,350 „
Zahr-el-Kazib	10,130 „	El-Akhyar	7,830 „

clayey tracts, where a little moisture is collected during rainy seasons, limit the base of this burnt-up region north-westwards in the direction of Damascus, and in the south-east towards the equator; but elsewhere most of the surrounding districts are covered with lavas and scoriæ. Such is the desert of Krâ, which towards the south-west separates Safa from Hauran. Still farther south stretches the desert of Harra, or the "Burnt Land," a circular plain of impalpable sands accumulated round a lofty central black crag. So fine are the sands of this dreaded region, that according to the Bedouins, horses, camels, and other animals sink in it, as if it were

Fig. 158 —Jebel Safa.
Scale 1 : 1,340,000.

6 Miles.

a liquid mass. After heavy rains the surface becomes a paste too weak to bear the weight of a camel.

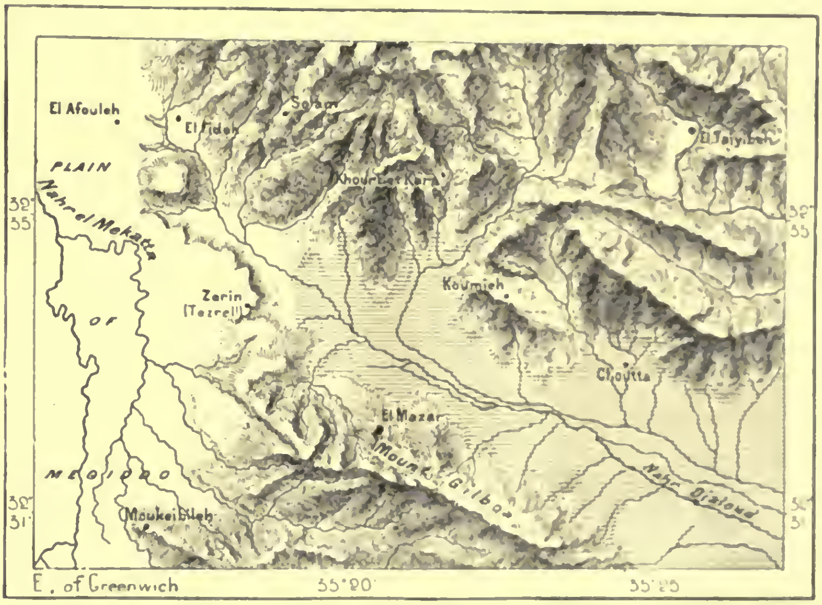
The lower Leontes, or Nahr-Kasimiyeh, forms the southern limit of the Libanon proper, although the Palestine highlands stretching thence southwards between the headwaters of the Jordan and the coast may be regarded as belonging to the same orographic system. But in this confused labyrinth of Galilean hills and valleys it is difficult to discover any regular order, except perhaps in the east, where the ridge skirting the depression of the Upper Jordan runs in the same axis as the Libanon. From this ridge several others branch off, mainly in the direction from east to west, and are themselves connected by secondary lateral chains. The Jebel-Jarmuk (3,950 feet), forming the culminating point of the Galilean highlands, rises north-west of Safed on the water-parting between the Jordan and the Mediterranean. But here the most venerated peak is Tabor (Jebel-Tor), a nearly

isolated mass rising to a height of scarcely 1,900 feet south of Nazareth. Its position on the edge of the great plain of Esdraelon, traversed by the Nahr-el-Mukattah and its affluents, formerly imparted a certain strategic importance to Tabor, on which are still seen the remains of mediæval fortifications, themselves preceded by still older Roman and Jewish works. A legend dating from the fourth century transfers the scene of the Transfiguration from Hermon to Tabor, on which three churches and three monasteries were erected in the sixth century in honour of the three tents, which Peter here proposed to pitch for Jesus, Moses and Elias.

South of Galilee the hills are almost completely interrupted by the broad and

Fig. 159.—The Zerin Depression.

Scale 1 : 1,190,000.



Below the level of the Mediterranean.

6 Miles.

fertile plain of Merj-ibn-Amir (Meghiddo, Esdraelon, or Jezrael), stretching south-east and north-west, with an average width of 15 miles, and sloping very gently towards the Mediterranean. The fall is much more precipitous towards the Jordan, where the Zerin depression, some 400 feet above the sea, has been selected as the most convenient point through which to cut the canal, by which some eccentric English engineers propose to connect the Gulf of Acra with that of Akaba in the Red Sea. Dividing Palestine into two distinct sections, and commanding both slopes of the country, Esdraelon was formerly a great battlefield between tribes or armies. Here Jews and Canaanites, Saracens and Crusaders, frequently met in deadly strife, and here, according to the expounders of Revelations, is to be fought

the final battle of Armagheddon, which is to secure the empire of the world to the Hebrews.

The semi-elliptical Bay of Acra is limited southwards by the headland of Mount Carmel, which forms the seaward extremity of the Jebel-Mar-Elias. This range, consisting mainly of limestones, is the most regular in Palestine, running due north-west and south-east from the coast to the low pass separating it from the Samarian uplands. Eastwards it falls abruptly down to the Esdraelon plain, and slopes gently to the Mediterranean, maintaining throughout a mean elevation of 1,000 or 1,200 feet. It culminates in the centre with Mount Carmel proper (1,830 feet), that is, the "Orchard," so named from the flowering shrubs and fruit-trees clothing its upper slopes. The more rugged headland was formerly the seat of an oracle visited by Pythagoras and consulted by Vespasian. Here, according to the Jewish tradition, took place that contest between Elias and the prophets of Baal which symbolises the everlasting warfare between the local gods of Syria and Palestine. Above the "Cave of Elias" now stands a sumptuous convent of recent date.

Gilboa—Trans-Jordan Uplands.

South-east of Carmel the Jebel-Fokuah, that is, the hills of Gilboa, form the commencement of the central range of Palestine, which runs mainly parallel with the Jordan and Mediterranean. Consisting of chalk cliffs interrupted here and there by eruptive basalts, it presents monotonous unpicturesque outlines, but encloses some extremely fertile valleys. Its axis, which here forms the water-parting, runs twice as near the Jordan as the Mediterranean, its geographical position thus explaining the incessant antagonism between the western lowlands, with their civilised population, and the uplands occupied by the rude inhabitants of Judæa. In these uplands the crests have a mean altitude of 2,000 to 2,500 feet, while Ebal and Garizim, the two famous peaks overlooking the plain of Sichem, exceed 3,000 feet, and the whole system culminates in the Tell-Asur, rising north of Jerusalem to a height of nearly 3,400 feet. Farther south the hills gradually fall in the direction of the Sinai peninsular, where they merge in the rugged plateau of Badiet-et-Tih.

Like those of Palestine proper, the Trans-Jordan highlands consist of a crevassed tableland from 2,500 to 3,000 feet high, seldom presenting the aspect of a distinct range. East of the Upper Jordan the plateaux of Jaulan (Gaulanitis), have the appearance of hills only along their western escarpments, which fall in terraces down to Lakes Huleh and Tiberias. These uplands are broken into unequal sections by the channels of the Yarmuk and its affluents in the north, and southwards by the Jabok torrent and the Mojib (Arnon), draining to the Dead Sea. East of the Ghor, properly so-called, that is, the Jordan Valley between Lake Tiberias and the Dead Sea, the Jebel-Ajlun, or heights of Galaad, present towards the river a series of fertile terraces covered here and there with groves of oak and other forest-trees, and in the depressions yielding in wet seasons rich crops of excellent cereals. East of the Dead Sea the escarpments are more abrupt, and

PENINSULA OF SINAÏ

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vegetation becomes rarer on the slopes and plateaux of El-Belka, or Land of Moab and Ammon, as this region is more generally called. On the whole the Trans-Jordan highlands are more elevated than those of Palestine. The Jebel-Osha, or Mount Osea, nearly opposite the Tell-Asur, has a height of 3,520 feet, and a summit in Moab 3,900 feet, while farther south the hills skirting the Wed-Arabah and merging in the Midian uplands rise to 4,000 feet. Of all the Trans-Jordan peaks

Fig. 160.—Peninsular of Sinai—Ain-el-Huderah.

the most famous, although not the highest, is the Jebel-Neba, traditionally supposed to be the Mount Nebo whence Moses contemplated the promised land.

The Sinai Highlands.

The Sinaitic orographic system is clearly separated from that of Palestine, the uplands of Arabia Petræa consisting mainly of irregular masses from 1,500 to 2,000 feet high, broken by broad ravines into distinct groups. The region lying between

the Suez Canal and the Arabah depression forms, roughly speaking, a plane inclined towards the Mediterranean, and terminating abruptly southwards in the Jebel-et-Tih, which consists of two ranges converging at a right angle, and facing in the same direction as the Ras-Mohammed at the apex of the triangular peninsular. Some of the summits in the Jebel-el-Tih are over 3,000 feet high, and the whole

Fig. 161.—Mount Serbal.
Scale 1 : 55,000.

2,200 Yards.

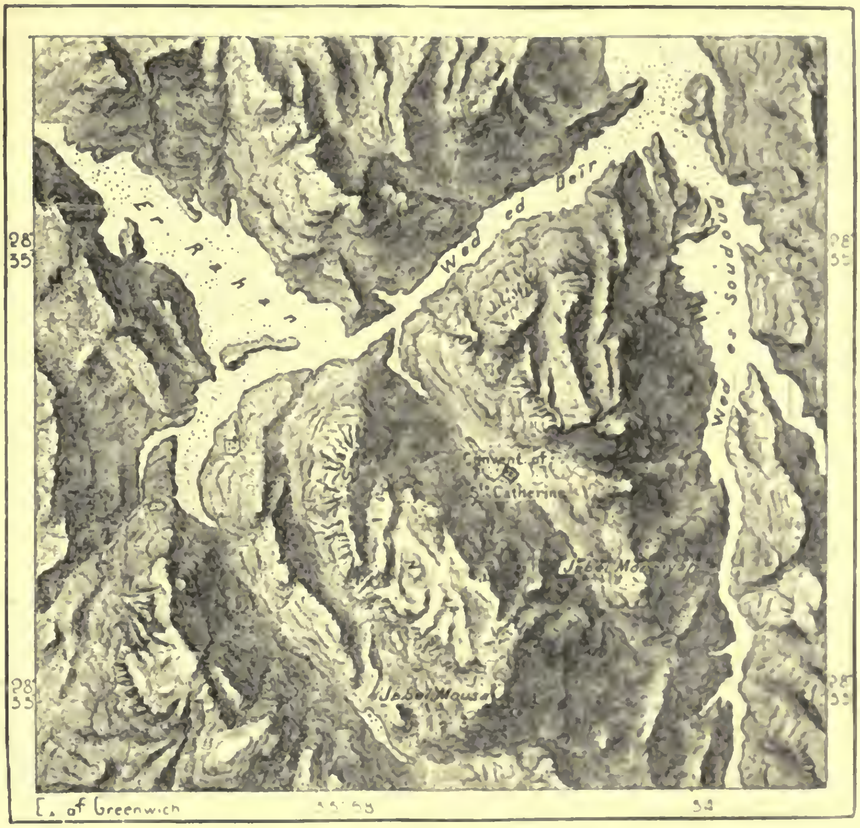
chain is separated from the southern plateau of Arabia Petræa by the broad beds of the Wad-el-Ain, Ain-el-Huderah, Wad-Nesb, Wady-Feiran, and other mostly dry watercourses draining east to the Gulf of Akabah, west to that of Suez.

The hills skirting the Red Sea, west of the Jebel-et-Tih, consist of monotonous chalk masses, which are replaced in the south by the arid granite, gneiss, and porphyry highlands of Sinai proper. Many of these formations abound in iron

and copper ores, and in turquoises, which are difficult to work, owing to the lack of fuel and of means of transport. Yet the copper beds in the Magarah Valley are often visited by the Bedouins in search of the turquoise, which is supposed to dispel evil influences, to procure the favour of princes, to ensure victory, or dissipate dreams of ill omen. From the earliest historic times the Egyptians drew their supplies of copper and mineral dyes from Magarah, and here the polished walls of porphyry bear well-preserved hieroglyphic inscriptions, which are supposed to be the very oldest written documents in the world. In these rocky archives are

Fig. 162.—Mount Sinai.

Scale 1 : 65,000.



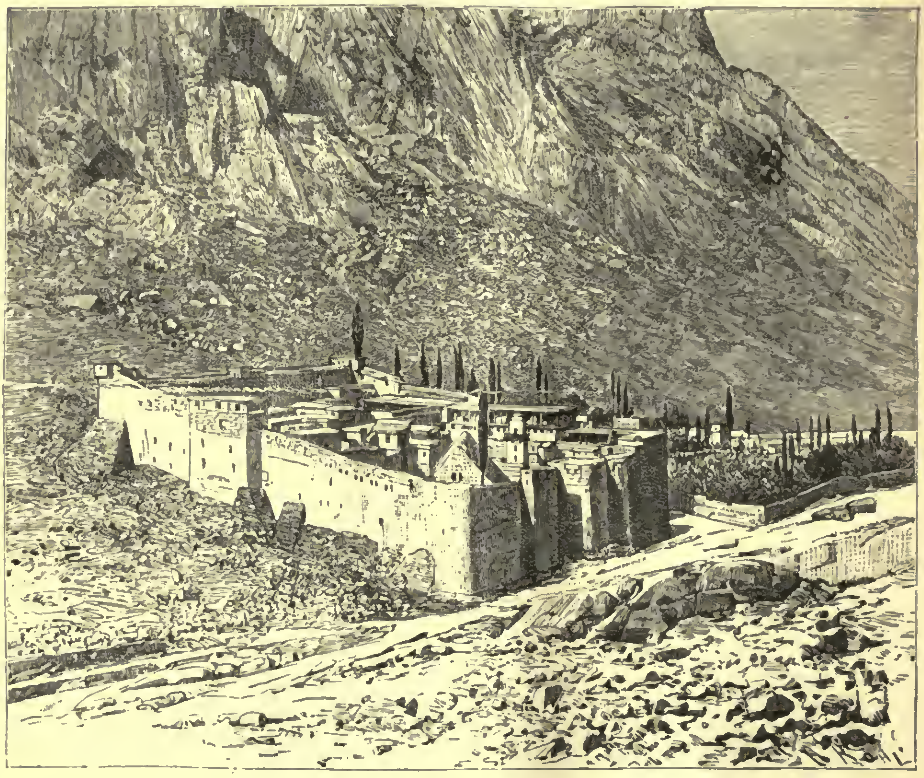
2,200 Yards.

recorded the names of Snefru, first of the Pharaohs, Shufu (Cheops), builder of the Great Pyramid, Ramses II., father of Menephta, during whose reign the Israelites escaped from Egypt. The written history of the Pharaohs thus comprises a period of over fifteen hundred years; and in the neighbouring Wed-Mokattab the rocks are covered with innumerable *graffiti* or "scribblings," mostly in a Syrian dialect mixed with Arabic terms, and dating apparently from the last century of the old and first of the new era.

The mountains which at present bear the collective name of Sinai, form a confused group of heights rising above a still more entangled network of wadies,

which seen from above presents the appearance of a storm-tossed sea. The Jebel-Katherin, highest and central point of the system, occupies very nearly the geometrical centre of the peninsular. North-westwards it throws off the Jebel-Serbal ridge, terminating at the Wady-Feiran, while another range falls gradually southwards to the Ras-Mohammed. The whole eastern slope is also filled with a labyrinth of eminences commanded by the Jebel-Farani and Abu-Mesul groups. But in the south-west the highlands present the form of a regular sierra skirting the shingly El-Gaat plain, which appears to be an upheaved marine bed. It falls from about 1,000 feet at the foot of the hills uniformly to the present coast, and

Fig. 163.—Convent of Sinai.



the slope is continued under the Gulf of Suez, which in the middle of the channel has a mean depth of about 240 feet.

Most explorers have accepted the hypothesis of Lepsius, who regards the Serbal, or "Baal's Peak," 6,820 feet, rather than the central summit, as the true Sinai of Scripture. The veneration in which this region was formerly held is abundantly attested by the ruins of churches and monasteries at its northern base, by the remains of Pharan Phoinikon, or "Pharan of the Palms," and the thousand inscriptions left by generations of pilgrims in the Mokattab Valley. But the tradition changed after the time of Justinian, when a fortress was erected near the Jebel-Katharin, and a new monastery sprang up in the neighbourhood. The Arabs,

who formerly offered sacrifices at this spot, have no tradition identifying Serbal with the "Throne of Allah," or the "Seat of Moses." Their veneration is directed more to the less elevated Jebel-Monneija in the north-east, which they regard as the summit on which Moses conversed with God. Notwithstanding its extremely rugged aspect, Serbal has been several times ascended since the time of Burkhardt. It is pierced in some places by natural caverns, which were formerly occupied by hermits, and which the faithful even regarded as excavated by the recluses.

The Jebel-Katharin, highest point of the Sinaitic group (8,650 feet), rises above the winter snowline, and from its summits a panoramic view is commanded of the surrounding heights and wadies, of both gulfs, and even of the distant African highlands. East of it rises the nearly isolated Um-Alowi, possibly the ancient Jebel-Elohim, or "Mountain of God," and the southern view is broken by the Um-Shomer, only a few feet lower than the Jebel-Katharin itself. Still farther south stands the Jebel-Thebt, and to the north the Jebel-Musa, or "Mountain of Moses" (7,470 feet), which the monks of the neighbouring convent regard as the mountain where was promulgated the Hebrew Law. Between this and the twin peak of Ras-Safsafeh stands the wealthy convent of St. Catharine (5,100 feet), whose revenues are derived from palm-groves scattered over the peninsular, and from large estates in Crete and Cyprus. The community, which claims the protection of a pretended firman from Mohammed, formerly possessed some valuable manuscripts, which are now in St. Petersburg.

Rivers of Syria and Palestine.

The Syrian hydrographic system is mainly determined by the long depression of the Bekaa, which lies between the parallel Libanon and Anti-Libanon ranges, and which has a northern and southern slope. In one direction flow the waters of the Orontes to the Gulf of Alexandretta, in the other those of the Jordan through two successive lakes to the Dead Sea. The permanent and intermittent streams east and west of this depression have not the space required to develop basins of any considerable size. Those to the west reach the Mediterranean as soon as they escape from the mountain gorges, while those flowing eastwards run dry in the sands of the desert. Of these the largest is the Barada, and of the Mediterranean affluents the most voluminous next to the Orontes is the Leitani, and both rise in the same region as the Orontes and Jordan. The Syrian water system thus presents the form of a cross, in which the Orontes and Jordan constitute the trunk, the Leitani and Barada the arms, all radiating from the moderately elevated water-parting of the Bekaa between the Libanon and Anti-Libanon. Near the point of intersection lies the small closed basin of the Kefr-kuk, which is regarded by the natives as one of the sources of the Jordan.

The Orontes, which is locally known as the Nahr-el-Asi, rises on the west slope of the Anti-Libanon, a little to north of Baalbek, and its upper course has to overcome many obstructions, causing its waters to collect in lakes or swamps. Above Horus it thus developes a large basin, which covers an area of over 20 square miles,

thanks to an old Roman dam raising its level over 10 feet. Farther down it also expands below Hamah into riverain marshes, the remains of another lake formed by an embankment near Apamea (Kalat-el-Medik). Even in its lower course, between Antiochia and the coast, the Orontes falls in rapids over the remains of an ancient rocky barrier, which formerly caused it to fill a large lacustrine basin, now an undulating plain with a central depression still known as the Ak-Deniz, or "White Sea." This marshy and sedgy tract, the haunt of myriads of waterfowl, stretches north-east of Antiochia to the southern foot of Amanus, and is fed by the Nahr-Afrin, the Kara-su, and a few other streams.

The space between the Orontes and Euphrates systems is a region of closed basins, such as those of the Koveik (Kwaïk), flowing southwards to Aleppo from near

Fig. 164.—Lake Yamuneh and Nahr-Ibrahim.
Scale 1 : 400,000.

Aintab, and the parallel Nahr-ed-Dahab, which expands into the great *Sebkha*, or saline lagoon of Jabul. The river of Damascus, the ancient Chrysorhoas, or "Golden Stream," also loses itself in marshes. Formed by two headstreams rising east and west of the Jebel-Zebdani in the Anti-Libanon range, it escapes from the hills through deep ravines down to the plains, where it joins a more copious stream flowing from the fathomless lakelet of El-Fijeh. Formerly the pure waters of this basin were conveyed by an aqueduct to Damascus. At present they join the more turbid Chrysorhoas, and after ramifying into numerous irrigation canals the waters are again collected in a common system of marshy tracts or lagoons. After a succession of wet seasons the Barada and its canals, as well as the Pharphar or Nahr-el-Arwad from Mount Hermon, spread out into a series of meres or "lakes," described by Oriental poetic fancy as "blue sapphires set in emerald rings," but in

reality dreary plains occasionally flooded, but usually quite dry, and here and there covered with a saline efflorescence.

On the west slope of Libanon the streams are partly fed by the underground waters collected in the cavities of the mountain limestones. Thus above its junction with the Nahr-el-Arus, the Nahr-el-Kebir receives the intermittent Nahr-Sebti, the "Sabbatic River" of Josephus, which is supposed to be dry for six days, and to flow only on the seventh, which falls, according to the Jews on Saturday, according to the Mohammedans on Friday. But its channel is generally flooded every third day. Farther south the Nahr-Kadisha, or "Holy River," receives similar supplies from the highest peaks of Libanon, while the more copious Nahr-

Fig. 165.—Gorge of the Nahr-el-Leitani.

Scale 1 : 450,000.

0 to 32 Feet. | 32 to 160 Feet. | 160 Feet and upwards.

6 Miles.

Ibrahim flows for a long distance below the surface. Its headstream rises on the eastern slope in a lakelet near the village of Yanumeh, and after winding through a series of subterranean fissures, reappears intermittently on the western slope about 4,000 feet above sea level. After emerging from the Afka cavern, the Nahr-Ibrahim, or Adonis of the ancients, enters the Mediterranean about 4 miles south of Jebail (Byblos).

The Leitani or Leontes, next to the Nahr-el-Asi the largest flowing into the Mediterranean, rises north of Baalbek, within a few hundred yards of the farthest headstreams of the Orontes. But its first permanent feeder springs from a gorge in the Anti-Libanon some 15 miles to the south of Baalbek. And after receiving a thousand rivulets from both ranges, the Leitani at present trends at a sharp

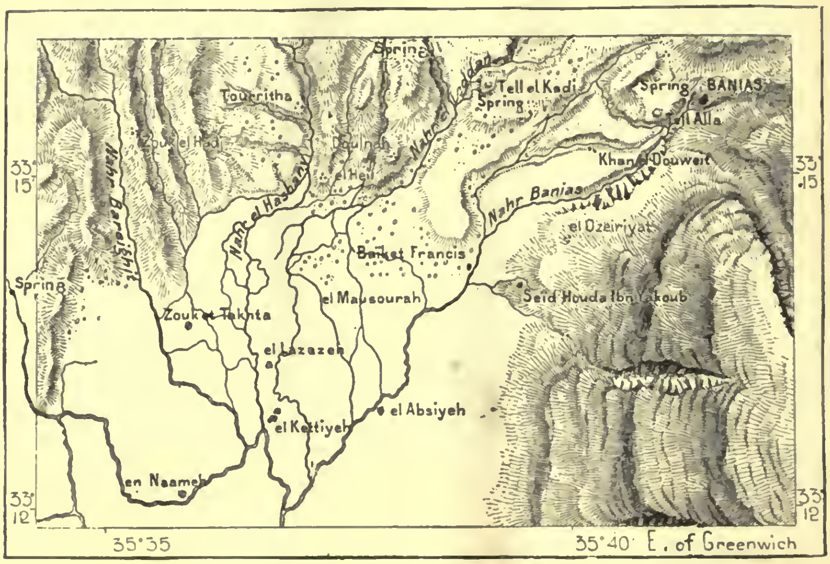
angle westwards to the coast, but it seems to have formerly continued its southern course to the Upper Jordan basin above Lake Huleh. A precipitous bluff on the left bank above the bend is crowned by the superb mediæval Castle of Beaufort (Kalat-esh-Shukif), below which the river takes the name of Leitani of Nahr-Kasimiyeh, or "River of Separation." It discharges on an average about 5,000 cubic feet per minute into the Mediterranean, at a point a little over 4 miles north of Tyre.

The Jordan and Dead Sea.

The Jordan, that is, the "River" in a pre-eminent sense, differs from all other streams in the depth of its valley relatively to the ocean level. Throughout nearly the whole of its course between the "Waters of Merom" and the Dead Sea, it

Fig. 166.—Sources of the Jordan.

Scale 1 : 125,000.

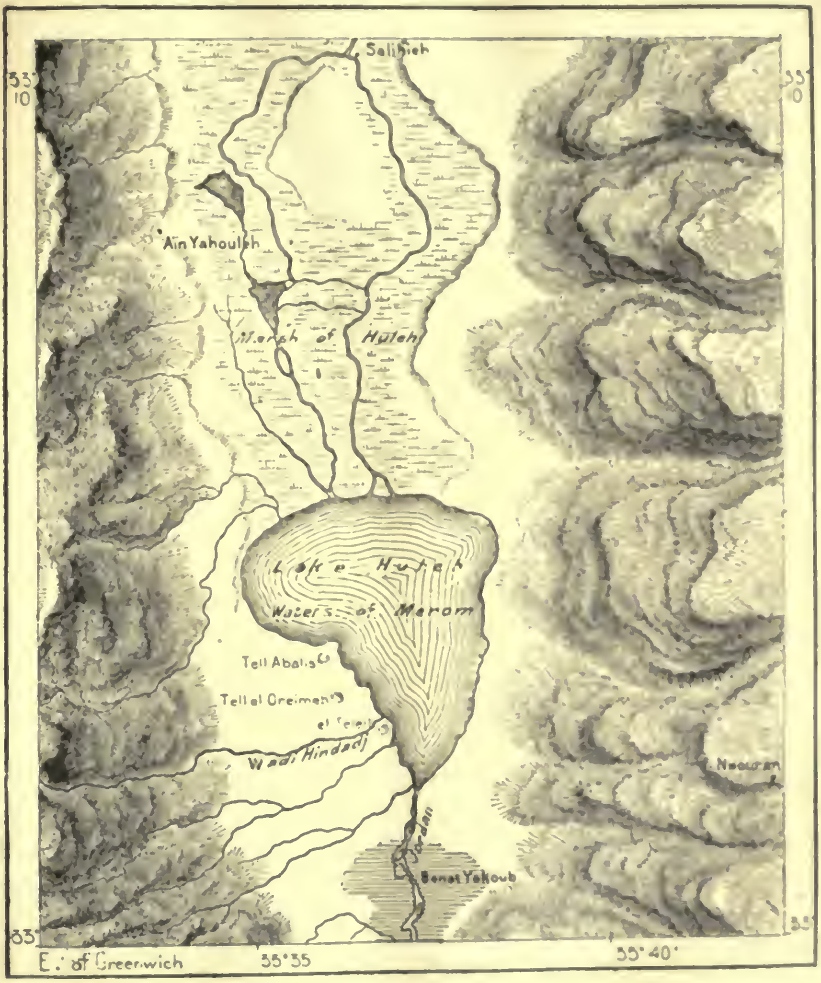


2½ Miles.

flows in the Ghor depression, which is everywhere lower than the Mediterranean, the difference in the southern portion of the valley being scarcely less than 1,300 feet. The Ghor may be regarded as a continuation of the Bekaa, although at the point of junction west of Hermon the direction of the longitudinal valley is changed from north-east and south-west to due north and south. Like the other Syrian rivers, the Jordan is assumed to take its rise where it becomes a permanent stream. Hence, although occasionally sending down a considerable volume, the upper torrents springing in the Wady-et-Teim, an advanced valley of Mount Hermon, are not regarded as belonging to the Jordan system. The true source is a copious perennial spring near Hasbeya, whence the Nahr-el-Hasbani, or western Jordan, flows southwards in a deep and narrow gorge in the surrounding lavas. Some 15 miles farther south the Tell-el-Kadi bluff gives rise to an extremely

copious spring, which when joined by another from above, becomes the Nahr-el-Leddan, or Central Jordan, about the northern limit of Palestine proper. For Tell-el-Kadi appears to be the eminence on which formerly stood the city of Dan, on the very border of the "Promised Land," and Leddan is doubtless a modified form of

Fig 167.—LAKE HULEH.
Scale 1 : 160,000.



Below the level of the Mediterranean.

3 Miles.

Ed-Dan, or "River of Dan." Lastly, a third and still more famous, although less copious Jordan, rises more to the east in the Banias gorge, whence it flows south-westwards in a channel whose banks are fringed with the oleander and strewn with ruins. Here a chapel of St. George has succeeded a temple of Augustus, which had been itself preceded by an older sanctuary.

The three headstreams uniting in a common channel about 5 miles below Tell-el-Kadi, continue their winding course southwards to a broad valley, where they soon disappear in a forest of papyrus reeds, merging farther on in the shallow basin of the "Waters of Merom," now known as the Bahr-el-Huleh. According to the English survey, this basin is only 6 or 7 feet above the Mediterranean; but beyond this point the decline is so rapid that at Lake Tiberias, 24 miles farther south, the river is already 690 feet below the Mediterranean, while the lacustrine cavity itself is 830 feet deeper still, although its mean depth is not more than 135 feet. This ancient Sea of Galilee, or Genezareth, covers a space of about 700 square miles, but was formerly far more extensive, as is evident from the old shingly beaches left by the subsiding waters on the surrounding terraced lands. The highest of these beaches corresponds with the level of the Mediterranean, with which it appears to have at one time communicated through the Esdraelon plain. Since its severance from the sea, Tiberias has become a fresh-water basin, while of its fauna many represent intermediate species between those of fresh and saline waters. As in the days of the fishers of Nazareth, the riverain population still capture large quantities of fish, although but few boats are now seen on the lake.

About 6 miles below Tiberias the Jordan is crossed by a solitary bridge, beyond which it continues its uniform descent through the Ghor depression down to the Dead Sea. In this section of its course, about 63 miles altogether, there is a total fall of 660 feet, evenly distributed over the whole distance. But before reaching the lake it expands into sluggish shallows fordable at a little distance above its mouth, through which it discharges a volume roughly estimated at from 1,000 to 2,350 cubic feet per second.

The Dead Sea, so named by the early Christians in probable allusion to the biblical legend of cities engulfed in its depths, deserves the title from the arid and lifeless aspect of its shores, its heavy waters, and dreary surroundings. Its area may be estimated at about 370 square miles, its level at 1,310 feet below the Mediterranean, and its greatest depth, near the north-east coast, at 1,330 feet. Since the middle of the present century its level has risen, and the mean depth is now about 1,100 feet north of the Lisan peninsular, a small rocky ridge connected by a tongue of sand with the Moab coast. The circular gulf south of this promontory is nowhere more than 14 feet deep, and the whole volume of the lake is probably about 120,000,000,000 cubic yards, or about twice that of Geneva; but, like Tiberias, it was formerly of far greater extent. Round the whole basin stretch at various altitudes shingly terraces, which are evidently old beaches, and which contain the shells of species still living in the Mediterranean. On the west side no less than nine such terraces occur, the chief of which, consisting partly of bituminous strata, forms a continuation of the Ghor Valley, while the highest corresponds exactly with the level of the Mediterranean. A study of these beaches naturally suggests the idea that the Dead Sea, together with Lake Tiberias and the whole of the Ghor depression, formed at one time a marine gulf connected with the Mediterranean through the Strait of Esdraelon. But the southern depression continuing the Ghor Valley towards the Red Sea does not appear to have ever com-

LAKE AND CITY OF TIBERIAS

municated with the Gulf of Akabah, from which it is separated by a ridge 800 feet above sea level.

Even about the mouth of the Jordan the water of the Dead Sea is fully one-sixth heavier than fresh-water.* It supports the human body, leaves a slight saline coating on objects plunged into it, deposits crystals on the shore, and has so nearly reached the point of saturation that it scarcely dissolves the base of a salt hill skirting the south-east coast. But the Dead Sea is distinguished even less by its great abundance of salt than by its extreme richness in chloride and bromide of magnesium, which has been attributed to the almost complete absence of all the fishes and other animals inhabiting its affluents. The crustaceans and insects carried down by the Jordan perish on reaching the lake, which, unlike marine basins, is quite destitute of iodine and phosphorous. On the other hand, it abounds in bituminous substances, whence its ancient name of the "Lacus Asphaltites." The large masses of bitumen, however, spoken of by the ancients as floating on the surface are now rarely seen. The naphtha springs which probably exist at the bottom seem to indicate geological formations analagous to those of the bituminous districts in West Persia and Mesopotamia. But there are no traces of recent volcanic action, or of anything to justify the hypothesis of an eruption which some four thousand years ago destroyed Sodom, Gomorrha, and three other cities in the district. The sites of the cities themselves have also been sought for in vain. Nor are the fruits fair to behold, bitter to taste, peculiar to this basin; some, like the ilex, belonging to the flora of Asia Minor, others to those of Yemen and Nubia.

Fig. 168.—Dead Sea.
Scale 1 : 900,000.

The Arish, whose lower course forms the frontier between the Turkish province of Syria and the Khedive's possessions, is represented on the maps as draining a basin some 10,000 square miles in extent. In reality it is a mere system of mostly

* Mean specific weight of sea-water: 1,027; of the Red Sea, 1,033; of the Dead Sea at the surface: 1,162; on the beach: 1,256.

dry watercourses, where there is abundant evidence of extensive erosive action in former geological times. Far more important than these occasionally flushed wadies are the permanent springs, such as those of Ain-Musa, or the "Fountains of Moses," which have their source near the coast, some 12 miles east of Suez. These wells, which according to the legend were formerly saline, but rendered sweet by the leader of Israel, are slightly thermal, and support a rich vegetation in the surrounding gardens and palm-groves.

Climate.—Flora and Fauna.

In Syria and Palestine a great diversity of climate is caused by the longitudinal form of the land, stretching across nine degrees of latitude, and still more by the differences of relief, rising in the Libanon 10,000 feet above, in the Ghor depression sinking 1,300 feet below, the Mediterranean. While the Syrian desert and Sinai resemble the Sahara in their extremes of temperature, certain sheltered valleys facing the Mediterranean enjoy a marine climate varying little from month to month.* The isothermal lines run nowhere normally east and west, but follow rather the mountain ranges, which are disposed north and south, parallel with the coast. In the Ghor they develop concentric ovals corresponding with the outlines of the escarpments, and the temperature is six degrees higher on the shores of the Dead Sea than on the Jerusalem plateau.

In Syria there are only two seasons, summer and winter, the latter rainy, the former almost absolutely dry. Snow rarely falls, although in 1753 most of Palestine was covered with snow, and the cold was so intense that people were frozen to death in the neighbourhood of Nazareth. The west and south-west winds are the chief cloud-bearers, while the dreaded *shurkayeh*, or sirocco, blowing from the southern and south-eastern deserts, burns up the vegetation. Notwithstanding the abundance of winter rains, the land becomes parched in the early summer, when all spontaneous vegetation disappears except prickly shrubs and trees. Nor is there any vegetable humus properly so called in Palestine, where even the most fertile soil is merely so much sand or clay mixed with disintegrated limestone.

The general aspect of the land, which once "flowed with milk and honey," seems to show that it formerly enjoyed a more humid climate than at present. The old writers describe Palestine as mostly covered with forests, which have since entirely disappeared, except near the coast and on some slopes exposed to the moist winds. The arable lands were also much more extensive, reaching far into the surrounding deserts, where the traces still remain of old plantations. But if the atmosphere, as elsewhere in Western Asia, has become drier, the general salubrity of the country has at least remained unimpaired. Drainage is facilitated by the slope of the ground, and fever-stricken marshes are small in extent, except in the neighbourhood of Antiochia and a few other spots.

The Syrian flora, like the climate, has undergone a few modifications. Dates

* Mean winter temperature at Jerusalem, 47° Fah. Summer, 76°. Rainfall, 36 inches.
" " " Beirut 54° Fah. " 81°. " 22 "

are now rare in the Jericho oasis, the banana is no longer cultivated on the banks of lake Genezareth, and the cedars of Libanon have been mostly replaced by the *pinus bruttia*. The forest vegetation has retained its primitive aspect only in some districts of the Amanus, where the groves of oak, beech, cedar, and pine resemble those of the Cilician Taurus. The fauna also has been slightly changed. Most of the domestic animals are inferior in size to those of Asia Minor and Europe. The boar and jackal still survive, but the lion has disappeared, and the

Fig. 169.—Landscape in the Sinai Peninsular.—View taken at Raphidim.

panther and ounce have become rare in the Libanon and Anti-Libanon. The Syrian bear is now confined to the Jebel-esh-Sheikh and some other northern uplands, and the crocodile, whose presence in this region had been doubted, still lingers in the Nahr-Zerka, south of Carmel, the "Flumen Crocodilum" of Pliny, and in the Nahr-el-Falek on the coast of Samaria. The Syrian variety is much smaller than the monster of the African rivers, seldom exceeding five feet in length. The Ghor depression resembles Africa no less in its fauna than its

climate, and the fifty-eight species of birds common to that continent and Palestine are found almost exclusively in the Jordan and Dead Sea basin.

INHABITANTS OF SYRIA AND PALESTINE.

The so-called "Arab" population of Syria is Arab in speech alone, and really descends from the old inhabitants of the country. So far from being exterminated by the Mussulman conquerors, they were left in possession of their lands and houses, subject only to the tribute. Although not compelled to become Mohammedans, the majority accepted the new faith, just as under the Byzantine regime they had accepted Christianity. But beneath these outward forms the Syrian fellah still clings to the old heathen rites, and as in the days when the Hebrew prophets hurled their maledictions against the worshippers of the "high places," they have still their fetish in every large tree and rocky eminence. The holy places, the *makam* or "stations," like the *makom* cursed by the law of Moses, are surmounted by small white cupolas sheltering the tombs of sheikhs or prophets. But these very "nebi," mostly named from the district, are probably the old local divinities, and like them are frequently associated in couples. The ceremonial is the same as it was three thousand years ago. The lamb is still slaughtered at the shrine; the holy rock or lintel of the tomb is still anointed with henneh; the elders of the village perform their solemn dances at the "station," rags and shreds of cloth are attached to every bush, bonfires are kindled on the surrounding hill-tops.

The ancient Canaanitish people also raised megalithic dolmens, menhirs, and stone circles, which are no longer met in Judæa, where they were demolished by the zealous observers of the law. But a few are still visible in Galilee and near Tyre, while many hundreds are still standing both in Moab and the Sinaitic peninsular. They are still regarded as altars by the Arabs, who worship the rising sun at these spots.

Like those of Anatolia, the inhabitants of Palestine consist of two distinct elements, the wandering Bedouins and the fellahin settled in villages and the outskirts of the towns. The former are diminishing in Palestine proper, where a few are found only in the Plain of Sharon, between Carmel and Jaffa. Beyond the Jordan, where they are still numerous, the chief Bedouin tribes are the Adwan (11,000), and the more powerful but less numerous Beni-Sakhr, or "Sons of the Rocks." In the Sinaitic peninsular, the Towarah, as they are collectively called, number about 8,000, and are supposed to be descended from the Amalekites. Their women, like those of the Awans, tattoo the lower lip in blue, and trace a few geometrical figures on the face. Amongst the Bedouins, who appear to be of diverse origin, some gipsies are also found wandering under the name of Nauri.

The Palestine fellahin, generally called Kufars or "Villagers," are despised by the Arabs on account of their rude speech and servile character. Yet they are mostly well made, and the women of Narazeth and Bethlehem are renowned for their beauty, which rightly or wrongly is attributed to a mixture of European elements. In some districts women taken in adultery are still stoned, and leprosy

prevails amongst the rural classes as it did thousands of years ago. The urban population, although of a somewhat heterogeneous type, is distinguished by certain characteristic traits—regular features but rather too broad, well-shaped nose, almond eyes, slightly prominent lips, animated expression. They are universally described as an extremely intelligent and highly gifted people, worthy of their Phœnician ancestors, and after long ages of servitude still full of national life and energy. They show a natural capacity, especially for trade, and numbers of Syrian merchants are settled in Marseilles, Liverpool, Manchester, and even in America and Scandinavia. Their chief defects are a disregard for truth, expressed in the national saying, "Lying is the salt of man," and an intolerable vanity and self-sufficiency. Every town, however, is distinguished by special characteristics, indicated or exaggerated by such local sayings as, "*Halebi, chelebi; Shami, shumi!*" "Aleppo folk slaves, Damascus all knaves!" Owing to their constant commercial relations with Mecca, the people of Damascus are the most Arab of all Syrians, and here Arabic is spoken in its greatest purity, although the old Syriac still survives in the district.

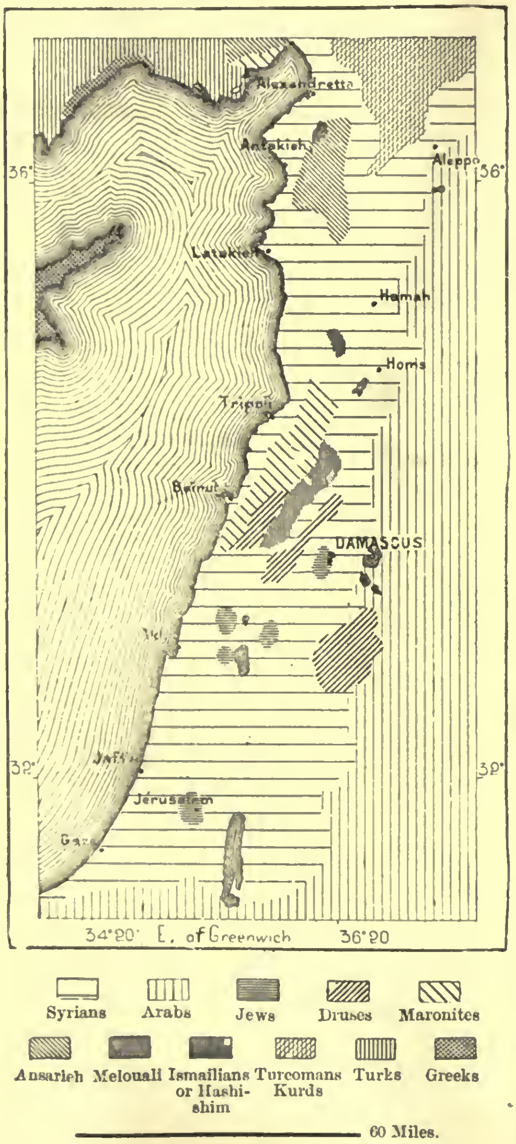
The Ansarieh—Druzes and Maronites.

The highlanders along the north coast between the Gulf of Alexandretta and the Nahr-el-Kebir, known as Nosairi ("Little Christians"), or more properly Ansarieh, are variously estimated at from 120,000 to 180,000. They are shepherds on the hills, labourers on the plains, but all keep aloof from their neighbours, although they now speak Arabic, and in the towns call themselves Mohammedans to escape persecution. But in secret they practice a special cult, the "mystery of the gods," supposed to have been orally revealed, and consisting of a Manichæan form of Christianity based on Sabaism. But the different *ashair*, or tribes, do not all profess the same dogmas, whence the contradictory statements of writers who describe their practices. Most of them are said to worship a "Quintinary," or deity of five persons, and prostrate themselves before trees, and especially before the "two princes of the bees," that is, the sun and moon. Women are held to be essentially impure, for "God," they say, "created the demons with the sins of man, but woman with the sins of the demons." Hence she is viler than the devil himself, and has not even the right to pray. The practice of deforming children's heads by bandages is very common amongst the Ansarieh, many of whom are distinguished by their light hair and blue eyes.

The Druzes, numbering probably about 100,000, occupy the south Libanon valleys and Hermon, but are gradually moving eastwards to the Hauran uplands. Here they verge on the steppe, where they have contracted alliances with the Anazeh and Shammar Bedouins. While still nominally subject to Turkey, they enjoy in this remote region a certain immunity from the oppression of the pashas, possess good arable lands and pastures, abundance of water, and a healthy climate, while the ruins of ancient cities supply them with the materials required to erect their dwellings. Like the Ansarieh, they call themselves Mohammedans, but are

justly disowned by all orthodox Mussulmans. The "Ed-Deruz," or followers of the prophet Mohammed Ed-Derazi, profess an extremely intricate system, in which metaphysical subtleties are blended with Shiah doctrines and older Gnostic and Mazdian reminiscences. The sect was founded by a Persian sage about the middle of the tenth century, while Hamza, another Iranian teacher, subsequently modified and codified its doctrines. The Druzes regard themselves as "Unitarians," and their fundamental dogma is certainly the unity of God, but a unity often embodied in human form. One of these divine incarnations was Ali; another the terrible Caliph Hakim, whose folly and cruelties are still legendary among the Mussulmans, and the last was Hamza, the "Centre of the Circle." He was the light of which Mohammed was the shade, for the birth of every disciple of evil is balanced by a disciple of good. And thus goes on the everlasting struggle between the two principles, a ceaseless warfare, in which the Druzes and the countless followers of "Gog and Magog" represent the host of the Lord. The number of souls having been fixed from all eternity, they pass endlessly from body to body, renewing the contest in each successive existence. "The soul is like a fluid poured out from vessel to vessel;" its destiny is pre-ordained, and the contract between God and the elect is deposited in one of the Egyptian pyramids. On the Last Day Hakim will entrust his sword to Hamza, that he may achieve the triumph of the true religion, and distribute rewards and penalties. Much of this doctrine is esoteric, veiled from the profane by formulas, signs, and numbers, the key to which is held only by the *okkal*, or "initiated." Sentence of death is pronounced against anyone revealing the mysterious rites, which are celebrated before a sacred calf set up on the "high places."

Fig. 170.—Inhabitants of Syria.
Scale 1 : 5,550,000.



DRUZE PRINCESS AND LADY OF THE LIBANON.

The first moral precepts inculcated to the Druzes are truth and brotherhood, all owing one to another the natural duty of veracity and acts of good-will. The same obligation does not exist towards strangers, who may even be justly killed, if their death be necessary for the national cause. Nevertheless the Druzes are distinguished above all their neighbours for great uprightness, dignity of manners, lasting friendships, and unaffected speech. They are generally very frugal, dressed with taste but without display, discreet of tongue, and courteous, saluting each other with the title of skeikh. Being the elect of the Lord, they consider it a point of honour to be better than others. Nowhere in the East are women more respected by the men, who concede to them equal rights in marriage and tenure of property. In instruction they are generally even superior, nearly all being able at least to read and write, and forming part of the initiated class. Monogamy is strictly observed, and the family is restricted by custom to four and two children for the wealthy and poor respectively. The political influence of the Druzes greatly exceeds the limits of the tribe, and such is their valour that in equal combat they hold victory over any foe as a foregone conclusion. Amongst the subjects of their emirs are peasants of various sects, all of whom are treated with great tolerance.

One of these non-Christian sects are the Metuali, who live in Tyre and Sidon, in Cœle-Syria and surrounding valleys, and who are everywhere noted for their extreme exclusiveness. They are Shiahs, who, like the Iranian Mussulmans, have a special veneration for the Caliph Ali, ranking him with or even above Mohammed himself. On all their wanderings they carry about a handful of Persian soil, would regard themselves as polluted by contact with a heretic, whether Sunni or Christian, and break the vessel used by a stranger.

Farther north, in the hills between Homs and Tripoli, dwell the Ismailians or Bathenians, a sect that has preserved the traditions of the Hashishim, or "Assassins," the Seyids of the "Old Man of the Mountain," enthroned in his stronghold of Alamut in the heart of the Elburz range. Like those of Kurdistan and Armenia, the Syrian highlands have long been a refuge for persecuted religions. On the open plains and plateaux unity of faith prevails, while diversity of worship is fostered by the inequalities of the relief in hilly districts.

The Maronites, who notwithstanding the original difference of their rites and dogmas, are now attached to the Latin Church, are one of the chief Christian communities protected by the physical character of their mountain homes. Firmly consolidated in one nationality, they are concentrated mainly along the western slope of Libanon, between the Nahr-el-Kelb, which reaches the coast a little north of Beirut, and the Nahr-el-Barid, which flows from the northern spur of Libanon. Some of their groups reside also in the Ansarieh country, in the cities of the plain, where they find support in the Catholic communities, and lastly in Cyprus, where a few of the old Maronite settlers still survived. So named from the patriarch Maron, founder of their Church in the seventh century, they became later on the natural allies of the Crusaders against Islam, and their doctrines thus became gradually assimilated to that of the strangers whom they followed to the battlefield.

In 1215 they recognised papal authority, and from that time they have been considered as under the special protection of the Western Catholics. Some of their families even bear European names, pointing at a probable intermingling of Frank elements during the time of the crusades. They show with pride two letters from Louis XIV. and Louis XV., promising them the constant aid of France, and during the present century they have always regarded themselves as the "French of the Libanon." Hence the extreme importance taken by the "Maronite Question" in the diplomatic contests in the East. In virtue of the treaties, the pasha of the Libanon must be a Christian, and as France protects the Maronites, the English extend their patronage to the Druzes. Then the local feuds fomented by foreign residents and by the Turkish authorities, glad to divide and rule, broke out into open war and massacre. In 1860 thirteen thousand Christians were butchered in the Libanon and neighbouring districts, and although the Druzes were accused of these wholesale atrocities, the chief perpetrators were the regular and irregular Turkish troops. Attracted to the spot by the heaps of slain, the ounces, hyænas, and wolves resumed possession of the land, which remained a prey to chaos till tranquility was restored by French intervention.

Amongst the Maronites the clergy are very powerful. Over a fourth of the soil belongs to the Church; at least 200 convents of monks and nuns, usually disposed in couples side by side, are scattered over the Libanon valleys. The priests marry, but if left widowers cannot take a second wife. They are elected by the monks, as are also the bishops, who in their turn nominate the *batrak*, or patriarch, under reserve of papal approval. Mass is said in Syriac, a language understood neither by the clergy nor the people. A great many Maronites learn French and speak it fluently, but seldom study the literature, their ambition being usually limited to the offices of dragoman (interpreter) or corresponding clerk. Those engaged in trade display little enterprise, generally confining themselves to local or retail business. The mass of the people remain tillers of the land, without energy or higher inspirations. Foreign artists, mostly Greeks, erect and decorate their buildings; what they themselves build is heavy and tasteless, although the Maronite art of mediæval times has left a few original edifices adorned with fresco paintings. The Yuk Mikail weavers also manufacture some fine silken fabrics, and the local goldsmiths, who have preserved the old Phœnician and Greek processes, make jewellery of a highly artistic type.

The Melkites and Jews.

Other united Catholics of pure Arab stock are settled in the neighbourhood of the desert south and west of Damascus. Immigrants from Yemen long before the Christian era, and subsequently reinforced by colonists from Hejaz and Nejd, these "Arab Arabs," as they call themselves, were converted to Christianity towards the end of the fourth century, and then came to be called "Greeks." After the Arab conquest, some preserved their religion, while others accepted the supremacy of the pope, who permitted them to keep their own hierarchy, and in their liturgy to

substitute the Arabic for the Greek language. They are called "United Greeks," although in no way connected with the Hellenes, and also Melkites, or "Royal," while their spiritual head, resident in Damascus, takes the title of Patriarch of Antiochia, Alexandria, and Jerusalem. Of all Asiatic Christians the Melkite Arabs are the most respected. Their valour is unquestioned, their natural intelligence has been developed by instruction, they speak their mother tongue with rare purity and elegance, and through their enterprising spirit they enjoy an influence out of all proportion with their numbers, which cannot be estimated at more than 100,000.

The Jews are now strangers in the land which belonged to their forefathers, and which they still consider as their original home. Poland and Galicia are the present centres of Judaism, and of 6,000,000 Hebrews scattered over the world, scarcely 40,000 are settled in the Holy Land. In Damascus alone they form a community which seems to be descended directly from an ancient colony. Till recently all the others were "Maugrabines" or "Spanioles," that is, descendants of the Jews expelled from Spain by the Inquisition. But since the middle of the present century, these have been largely reinforced by the so-called Ashkinazim, or Jews of East Europe. According to the Talmudic tradition, accepted by the German Jews, the Messiah will set up his throne at Safed. Hence the new arrivals have settled chiefly at the foot of that volcano. Tiberias also, where the Messiah is to be born again, has attracted numerous colonists, while some thousands of others have grouped themselves round the Temple of Jerusalem. The movement has been stimulated by the late persecutions in East Europe, and several agricultural colonies have recently been founded, especially on the Esdraelon plain, under the shadow of Carmel. Some English philanthropists have also endeavoured to obtain for them the rich lands of Gilead, beyond the Jordan. Unfortunately all these attempts were at first attended by disastrous consequences. The unhappy refugees were decimated by famine, sickness, and hardships of all sorts, and in many places the immigrants were dispersed or sent back by the Turkish Government. Nevertheless the movement must certainly tend to improve the social status of the Hebrew element in Palestine. The Sephardim or Spanioles, recently condemned to wear a black turban, are distinguished by their handsome features and dignified bearing, but being less enterprising and instructed than the Ashkinazim, they seem fated to become the proletariate of the nation.

Transformed to a battlefield for the various Christian sects, who claim the exclusive possession of the Holy Sepulchre, Palestine has in recent times not only received numerous missionaries, but also several colonies of European agriculturists. Of these the most flourishing are the Suabian Protestants settled near Jaffa and at Khaifa, at the foot of Mount Carmel. These colonists belong to the sect of the "Templars," who await the coming of the Messiah, and hope to be the first to answer his summons on the Day of Judgment. After many vicissitudes, their establishments, supported by the voluntary contributions forwarded by the mother country, have acquired some importance as industrial and trading centres for all the surrounding districts. They are gradually losing their religious character and

laying aside their communistic ideas, and several of the colonists have already begun to accumulate property on their own account. Some Greek and European speculators are also obtaining extensive concessions in the more fertile districts, and one of them has bought up half of the plain of Esdraelon with about twenty villages. The land is thus changing hands to the great injury of the fellahin, and the old communes, in which everyone had at least a virtual right to the soil, have already ceased to exist. The rural districts are becoming impoverished and the villages depopulated, while foreign settlements are increasing in the towns. The land is also frequently wasted by famines, when the peasantry are driven to consume wild herbs and the mallow-seed cooked in oil or milk.

Topography of Syria.

The Amanus highlands are one of those regions on the Mediterranean seaboard where the population has most diminished. Here the ancient city of *Issus*, where Alexander gained a memorable victory over the Persians, has ceased to exist, and can no longer be identified. *Iskanderun* or *Alexandretta*, that is, the "Little Alexandria," is nearly abandoned during the summer months, when the miasma from the surrounding marshes is especially fatal to Europeans. The latter then retire to the picturesque town of *Beilan*, which lies 1,600 feet above the sea in the neighbouring hills. Notwithstanding the sudden gusts that sweep down from these hills, the port of Alexandretta is one of the safest on the Syrian coast, and is also the most conveniently situated to become the future terminus of the projected railway between the Mediterranean and Euphrates basin. It is at present the chief outport for the cereals and other agricultural produce from the fertile region comprised between the Taurus, the Euphrates, and Orontes. Caravans of ten thousand camels are constantly on the road between Aleppo and Alexandretta, and the exports were estimated in 1882 at over £1,240,000.

Aleppo.—Homs.—Hamah.

Aleppo or *Haleb*, the chief caravan station between the Gulf of Alexandretta and the Euphrates, is one of the great cities of Asiatic Turkey. It stands at the converging point of several trade routes, and has also the advantage of abundant water from the river Koveik, which irrigates an extensive cultivated district noted for its pistachio-nuts. Aleppo, the ancient Berea, which itself succeeded to a still more ancient Khalebon or Khalebo, a name preserved in that of the present city, was at all times an important commercial mart. Before the discovery of the Cape of Good Hope and of the sea route to India, it was one of the most flourishing emporiums in the world. It had a very large population, even down to the year 1822, when over half its inhabitants perished in an earthquake of almost unprecedented violence. From that disaster it never quite recovered, and even declined in prosperity after the opening of the Suez Canal, by which it was deprived of a

ALEPPO—GENERAL VIEW.

portion of its traffic. Although two-thirds of its citizens are Mohammedans of Arabic speech, the population is otherwise of a very motley description, including Armenians and other Christians, Jews, Ansariehs, and Druzes, who are numerous, especially in the outskirts, while hundreds of Circassians, expelled from Bulgaria, have also found a refuge here.

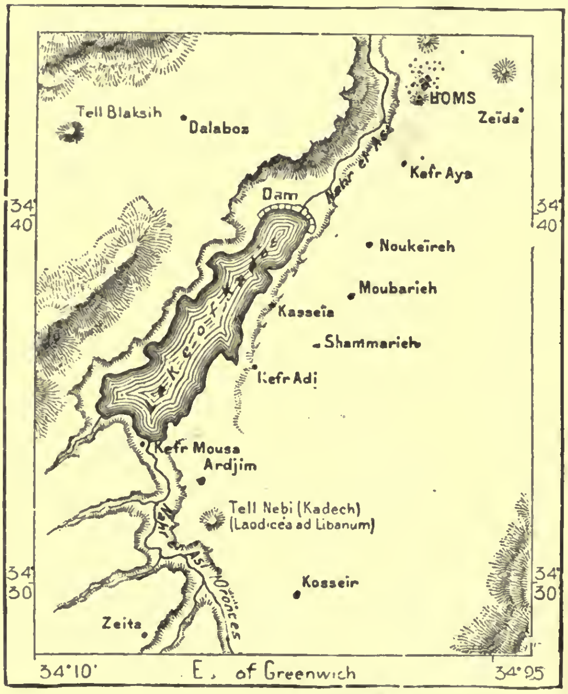
The city properly so called, enclosed within ramparts three miles in circumference, is intersected by narrow streets, some of which are completely roofed in by the projecting upper storeys of the opposite houses. In the centre of the most closely built quarter stands an artificial eminence about 200 feet high, whose steep slopes are faced with a regular coating of huge blocks. On this mound stood the citadel which held out against the Crusaders in 1124. Although since then ruined by the ravages of time and earthquakes, the fortress still presents an imposing appearance, with its broad square towers, posterns, flanking-turrets, and bastions. As a stronghold it has been replaced by the fortified barracks erected beyond the walls by Ibrahim Pasha, which afford accommodation for as many as ten thousand men. In medical records this Syrian city is well known for the cutaneous eruption known as the "Aleppo Button." This distemper, however, from which few of the inhabitants escape, and which even attacks the dogs and cats, is not peculiar to Aleppo, but also prevails in Orfa, Bagdad, and many other places, especially in the south of Persia.

In the upper Orontes basin the chief place is the ancient *Emessa*, a name surviving in its modern form of *Homs*. Like Aleppo, it owes its origin to trade, for here converge the natural highways following the course of the Orontes, and connecting the Mediterranean transversely with the Palmyra oasis and the Euphrates through the Nahr-el-Kebir Valley. The breach formed by this river between the Amanus and Libanon ranges marks the line that must be followed by the future railway destined to run from the coast at Tripoli to the Euphrates basin. At present over ten thousand camels pass along this route to Tripoli during the month of August, after the harvest. Homs, like Aleppo and most other Syrian towns between the hills and the Euphrates, is commanded by an artificial mound surmounted by old and crumbling fortifications. Even of its mediæval structures but few traces now remain, while of those dating from pagan times nothing but fragments have been preserved. Not a vestige is now to be seen of the sumptuous temple consecrated to the sun, whose priests ranked as kings, taking their seat with Heliogabalus on the imperial throne. At the beginning of the present century Homs was a very small place, but has since then acquired considerable importance as an industrial centre. Besides the silks interwoven with gold threads for which it was always noted, it now produces coarse cottons and other fabrics retailed throughout Syria and amongst the Bedouins of the desert. The raw silks from the Ansarieh highlands no longer sufficing for the local demand, it imports this produce from distant lands, exporting its manufactured goods especially to Egypt, Arabia, and Asia Minor. In 1883 its four thousand looms employed as many as twelve thousand hands, and yielded about £240,000 worth of textile fabrics. Lying on the verge of the Syrian desert, Homs is crowded with Bedouins during market-

days, and the Arab tribes encamped in the vicinity have recently been reinforced by some Circassian immigrants.

South-west of Homs and above the lake traversed by the Orontes, Lieut. Conder has discovered on the isolated eminence of Tell-Nebi-Mendeh some extensive ruins, which he identifies with *Kadesh*, the "Holy City" of the ancient Hittites, where in the year 1361 of the old era Ramses II. gained the great victory represented in the Ramesseum of Thebes. A mill near the mound still bears the name of Kadesh; but the marbles of the old temples and sarcophagi have lately been broken up and employed in the construction of some sugar works. In the neighbourhood is a deep chasm, the source of a copious spring, and, according to a local Mohammedan tradition, the spot whence the waters of the Deluge burst forth. A square eminence on the edge of the lake is known as "Noah's Ark."

Fig. 171.—Homs.
Scale 1 : 380,000.



6 Miles.

Hamah, standing on both sides of the Orontes some 28 miles to the north of Homs, is also a venerable city. Its very name differs but little from that which it bore some four thousand years ago, when the Israelites entered the Promised Land. Seen from the neighbouring heights, it seems divided into several quarters by the gardens and orchards, forming broad verdant spaces between its groups of white houses. From the banks of the Orontes it presents a still more striking appearance, with its green terraces and the enormous wheels of its chain-pumps, some of which have diameters of over 70 feet. The great depth of the channel through which the Nahr-el-Asi flows has necessitated the employment of these heavy hydraulic works to raise the water to the level of the surrounding gardens. Even so irrigation is so difficult and expensive, that the riverain population mostly restrict themselves to the cultivation of the so-called *zhors*, or "narrows," that is, the strip of land fringing the stream at the foot of the cliffs. These alluvial tracts, which average about a third of a mile in width, and which are extremely fertile, yield abundant crops of cotton, sesame, onions, and all kinds of vegetables. The arable lands on the upper plain as far as the desert grow barley and wheat of prime quality, and these cereals are largely exported. The industries of Hamah, much

inferior to those of Homs, are limited mainly to silk and cotton fabrics, employing about three thousand weavers, and representing an annual yield of £40,000.

Hamah has become famous in the history of epigraphy, thanks to the inscriptions discovered by Burckhardt in 1812 on some basalt blocks built into the walls of the bazaar, and now preserved in the museum of Constantinople. Subsequent discoveries made in various parts of Syria and Asia Minor have shown that these hitherto undeciphered hieroglyphical writings were due to the Hittite people, whose sacred city was situated farther south, near Lake Kades. The two recently dismantled towns of *Massiad* and *Kadmus*, standing on spurs of the Ansaryeh range south-west of Hamah, are the religious centres of the sect of the "Assassins."

North of Hamah the population is thinly scattered over the Orontes Valley, where unhealthy swamps alternate with rugged and almost inaccessible gorges. The Aleppo highways run east of the hills skirting the river on a slightly undulating plateau at an altitude of from 1,150 to 1,300 feet. Here several caravan stations in the midst of corn-fields have grown into considerable centres of population. Such are *Maarah-en-Noaman*, *Sermin*, *Riha*, and *Edlip* or *Idlip*, which last is a flourishing place surrounded by rich arable lands, and possessing some large soap and weaving factories. This part of Syria is especially noted for its numerous remains of Christian architecture, dating from the first centuries of the new era. *El-Barah*, lying in the heart of the hills south-east of Riha, may be compared to Pompeii, so admirably preserved are its churches, villas, tombs, and other structures. In some of the dwellings the windows, floors, and ceilings of the apartments are almost intact; the inscriptions are perfectly legible, and the doors, formed of a single slab, still turn on their hinges. At *Dana*, on the road between Aleppo and Antiochia, may be seen the finest Roman tomb in Syria, the date of which, 324 A.D., has been deciphered by M. de Vogue.

In the vast triangular space comprised between Aleppo, Hamah, and Antiochia are found the remains, if not of "three hundred and sixty-five cities," as asserted by the Arabs, at least of over a hundred Christian towns dating from the fourth to the seventh century, and still almost intact. But for the earthquakes, which have here and there rent the walls and caused the roofs to fall in, nothing would be missing except the woodwork carried off by the builders of more recent cities. The removal of the basalts and other hard materials, drawn from the quarries of the district, would have been too troublesome and expensive.

Antiochia—Ruad—Tripoli.

Below the great gorge of the Orontes, and beyond the point where it sweeps round the Jebel-Kosseir, the gate of inner Syria was formerly guarded by the mighty city of *Antiochia*, which for a time ranked next to Rome and Alexandria as the largest metropolis in the world. Its site had been admirably chosen, near the north-east corner of the Mediterranean, where the Gulf of Cilicia penetrates farthest inland, and at the converging point of three great national highways. One of these runs obliquely across Anatolia to the Bosphorus; another follows the

Syrian and Palestine seaboard to Egypt and Arabia, while the third reaches the Mesopotamian plains through the valley of the Euphrates, which here describes a vast curve in the direction of the Mediterranean. Thus nature itself points out this spot as a great centre of trade and intercourse between the surrounding peoples. Hence at two distinct epochs, during the first centuries of the new era, and at the time of the Crusades, Antiochia became one of the most commercial emporiums in the world. In those days the Syrian capital became the chief mart for the costly products of India, and here thousands of artisans were employed in the manufacture of the rich textiles known throughout the West as Antiochia cloth.

But the district was a great focus of underground disturbances, and few cities have suffered more from disastrous earthquakes. Probably the most terrific on record occurred in the year 115 A.D., when as many as 260,000 human beings are said to have been crushed beneath her ruined edifices. The city was again overwhelmed in 583, when the survivors were unable to recognise their dwellings amid the universal chaos, and even during the present century it was half destroyed in 1822 and again in 1872. It suffered also from numerous sieges, such as that of 1098, when it fell into the power of Bohemond. Thus the capital of the Seleucides has preserved few traces of its ancient splendour, and even the ramparts raised by the Norman Crusaders were partially destroyed by the Egyptian troops of Ibrahim Pasha, who used the materials in the construction of their barracks. The walls, formerly flanked by three hundred towers, follow the left bank of the Orontes, and then ascend the slope of the southern hills, where stood a formidable citadel. But the vast quadrilateral thus described is now a city of the dead, where everything has crumbled to dust. The flanking-towers, however, are still known by the names they bore at the time of the Crusades, names which thus serve to commemorate the great part played by Antiochia in ecclesiastical history. Here was born St. John Chrysostom, and this was the seat of one of the four great patriarchs of the Greek Church.

The present town of *Antakieh*, lying on the banks of the Orontes at the north-west corner of the enclosure, is almost lost amid the surrounding gardens and orchards. Seen from the encircling hills, it presents the aspect of one of those Eastern cemeteries where every grave has its cypress, as here every house has its mulberry, plantain, or fig-tree. Antakieh is gradually recovering some of its former importance as a centre of the export trade and of the soap industry. Some companies have also been recently formed for bringing under cultivation the surrounding plains, where the most remarkable monument is the still almost intact embankment constructed by Justinian, west of the citadel, across the deep ravine of the Onopnictes.

West of Antiochia the Orontes Valley, broadening out in one place, hemmed in in another between steep rocky walls, elsewhere ramifying into lateral verdant dales watered by sparkling rivulets, presents everywhere a charming prospect. Here the hamlet of *Beit-el-Ma* marks the site of the ancient *Daphne*, where stood the temples of Apollo and other pagan deities. The hills enclosing the valley on the north are known by the name of Jebel-Seiman, or Mount Saint Simeon, and

the memory of the famous "Stylites," or "Christian fakir," as he has been called, is perpetuated all over the district. The column, 30 cubits high, on which he lived and died, stands to the north of Antiochia near the ruins of Kalat-Seman, or "Simeon's Castle."

The present port of Antiochia is the pleasant little village of *Suedieh*, which lies on the southern slopes and at the foot of a hill skirted on the south by the mouth of the Orontes. Here the Arab craft is able to approach the shore some 6

Fig. 172.—The Ancient Tomb of Dana.

miles to the south of the now choked-up harbour of *Seleucia*. The roadstead south of the Ras-el-Khanzir headland has the advantage of lying near the Orontes, and would become the natural outport of this fertile basin but for its exposed position on the coast. At the foot of the limestone promontory bounding the low-lying plain of the Orontes on the north, the ancients had excavated an artificial harbour, the disjointed blocks of which are still visible on the beach at Seleucia. This little harbour might again be cleared out, but it would be inadequate for modern shipping, and long piers would have to be run out for half a mile seawards. Even then the

approaches would be dangerous, and the projected port will probably be constructed at Suedieh, near the river-mouth, and connected with Antiochia by a railway, the concession for which has already been granted. The hill at Seleucia is honeycombed with graves, and one of the roads leading to the interior is carried across

Fig. 173.—Antiochia and Suedieh.
Scale 1 : 360,000.

the cliff through a series of cuttings and tunnels. This is one of the grandest works of the kind executed by the ancients.

When the inhabitants of Antiochia were reckoned by the hundred thousand, the chief port was not in the exposed basin of Seleucia, but at *Laodicea*, which lay

some 60 miles farther south near a little gulf indented with numerous inlets. One of these, since partly filled in, was spacious and deep enough to receive a large number of vessels, which were sheltered by breakwaters and reefs from the surf. Notwithstanding the difficulties of communication with the interior across the Ansarieh hills, the ancient Laodicea, now called *Latakieh,* is one of the outports of

Fig. 174.—Latakieh.
Scale 1 : 170,000.

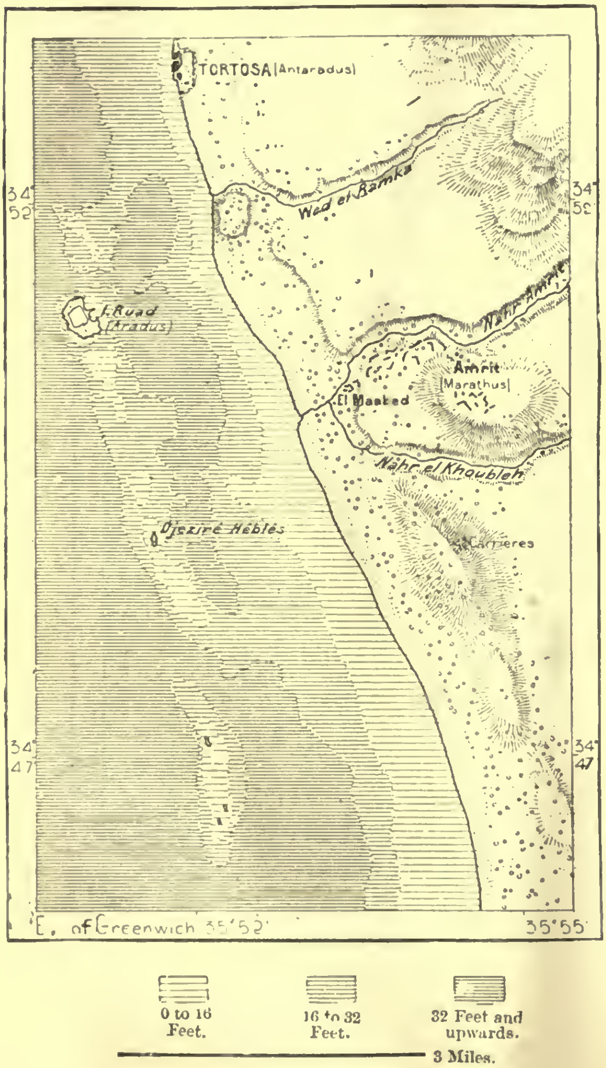
Aleppo, and the seat of a small European settlement. It stands on a terrace within half a mile of the "Marina" which lines the circular beach. It does a large trade in the strong tobacco grown in the neighbouring district, which is distinguished by its dark colour and a peculiar fragrance caused by fumigation over cedar-wood braziers. Latakieh also exports cotton, cereals, oils, and fruits, and is one of the ports proposed as the starting point of the Euphrates railway, which would be

carried over a pass in the Amanus range at an elevation of 1,650 feet, and cross the Orontes at the flourishing town of *Esh-Shugr*.

About midway between Latakieh and Tripoli lies the reef or islet of *Ruad*, the ancient *Arad*, or *Arvad*, which is about half a mile long, over a quarter wide, and crowded with houses. Some four thousand years ago this rock ruled an extensive kingdom, stretching on the Ansarieh mainland beyond the hills down to the Orontes Valley. While so many other royal capitals have disappeared, Arad still exists; but although scarcely less populous than in the days of its splendour, its only industry is sponge-fishing, and its only monuments are the remains of its Phœnician walls, which consist of huge blocks resting on foundations cut in the live rock. Formerly the town outgrew its narrow enclosures, and spread far and wide on the opposite coast, where its ruins may still be traced uninterruptedly for a distance of 9 miles. The northern quarter took the title of *Antaradus*, which became celebrated in mediæval times under the name of *Tortosa*, on the mainland. This stronghold successfully resisted Saladin in the year 1188, and was the last place surrendered by the Crusaders in 1291, when they withdrew to Cyprus. The formidable fortress and walls of Tortosa are built of large blocks, which no doubt belonged to older Phœnician monuments. *Marathus*, the modern *Amrit*, one of the southern quarters of the continental Ruad, contains a monument which is supposed to be the most ancient in the land of Canaan, and which is the only extant Semitic temple still easily recognised. *El-Maabed*, or the "Sanctuary," as this building is rightly designated by the natives, rises in the form of a cube

Fig. 175.—Ruad and Tortosa.

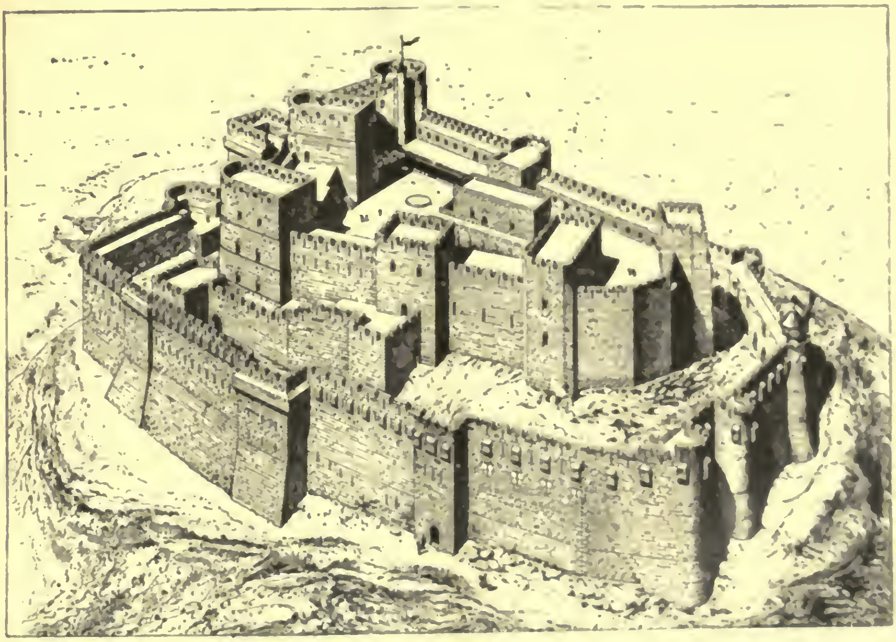
Scale 1 : 125,000.



above a square court cut in the rock, and formerly flooded with the waters of a sacred reservoir, on which floated an "ark" like that of the Israelites.

Other Phœnician remains are strewn over the Aradite plain, while the highways are commanded by formidable citadels crowning the heights, such as *Safita*, or "White Castle," the possession of which was often contested by Crusaders and Saracens. One of the terraces in this hilly region bears the colossal remains of *Hosn-Suliman*, whose enclosures are the best preserved in Syria. Like the "August Sanctuary" of Jerusalem, this was a *haram*, comprising a temple consecrated to Baotecetian Jupiter. Here is also the stronghold of *Kalat-el-Hosn*, the *Krak* of the Crusaders, which commands the fords of the Nahr-el-Kebir west of Homs. North of Tortosa the coast-route was guarded by the castle of *Margat*, the

Fig. 176 —Kalat-el-Hosan.



modern *Margab*, which was held by the Franks from 1140 to 1285. All these castles were mostly built by European craftsmen, and nearly all the stonecutters' marks are in Roman letters.

Tarabulus, or *Tripoli*, one of those "triple cities" which occur in so many parts of the Old World, is at once the seaport of North Libanon and the emporium of Homs and Hamah on the Upper Orontes. In the Phœnician period it was the common mart of the three cities of Tyre, Sidon, and Arad, whence a title which at present it deserves on other grounds. For it really consists of three distinct quarters: the castle of *Sanjal* (Saint Giles), former residence of the Counts of Tripoli, standing on a hill above the winding valley of the Nahr-Kadisha; the upper town, the "Pilgrim's Mount" of the Crusaders, which occupies the most advanced terrace of the spurs of Libanon on the left bank of the river; lastly the

"Marina," or El-Mina, lying over 2 miles to the north-west on a narrow peninsular,

Fig. 177.—Margab Castle.

where some remains may still be seen of mediæval fortifications. Some reefs lying a third of a mile from the coast are all that now remains of the Bakar, or break-

water, which formerly sheltered the port from the fierce western and northern gales. Being broken through at various points, these works are no longer able to protect the anchorage, where shipwrecks often take place when northern winds prevail. During the Crusades Tripoli, at that time held by the people of Provence and Languedoc, was the chief centre of trade between Syria and the West; besides four thousand silk and camelot, or camels' hair, looms, it had a flourishing glass

Fig. 178.—Tripoli.
Scale 1 : 86,000.

industry, and here was the chief emporium for the costly produce of the East. From this point the sugar-cane was transplanted to Sicily, whence it spread to Andalusia and the New World. And although the Crusaders began their occupation by burning its library, Tripoli also became a great school of learning, where Arabs, Nestorians, and Jacobites taught philosophy, medicine, and history even to the Westerns. At present it has no university, but as a trading place it is rapidly increasing. From Homs and Hamah it annually imports about twenty thousand

tons of merchandise by the caravan route, which may sooner or later be replaced by a railway to Aleppo crossing the coast-range at an elevation of 1,100 feet. To Europe and the Levant it forwards raw silks, coarse woven goods, delicious oranges, tobacco, soap, and the famous wines of the El-Marj district. The finest sponges on the Syrian coast are taken at Tripoli and the little port of *Batrun* to the south-west, and this industry is yearly growing in importance. Originally established by the Greeks of the archipelago, it is now mainly in the hands of the Syrian fishers, who have become as skilful as their masters, and who have the advantage of residing on the spot. They now employ over three hundred boats, and the yield increased from £24,000 in 1874 to £160,000 in 1880.

Batrun, the ancient *Botrys*, is now a mere fishing hamlet, while *Jebail*, the *Gebal* of the Hebrews and *Byblos* of the Greeks, occupies but a small portion of the square enclosure constructed by the Crusaders. Byblos, the "Holy City," dedicated to the worship of the goddess Baalat, and birthplace of the god Tammuz, the Adonis of the Greeks, is one of the oldest cities in the world, claiming a higher antiquity even than Tyre and Sidon. But all its pagan monuments having been systematically destroyed by the Christians, it has little now to show but its mediæval ruins and the vast necropolis hewn out of the live rock in the surrounding hills. Here is also to be seen the old channel cut in the cliff to deflect to Byblos the waters of the sacred river of Adonis, the Nahr-Ibrahim of the Arabs. The district yields a choice tobacco, which is sent to Latakieh, and there prepared for the market. Farther south the fertile Maronite valleys of the Kesruan forward a portion of their produce through the bay of *Juni*. Jebail itself has no harbour beyond a little basin less than three acres in extent, and badly protected by a dilapidated breakwater from the winds and surf.

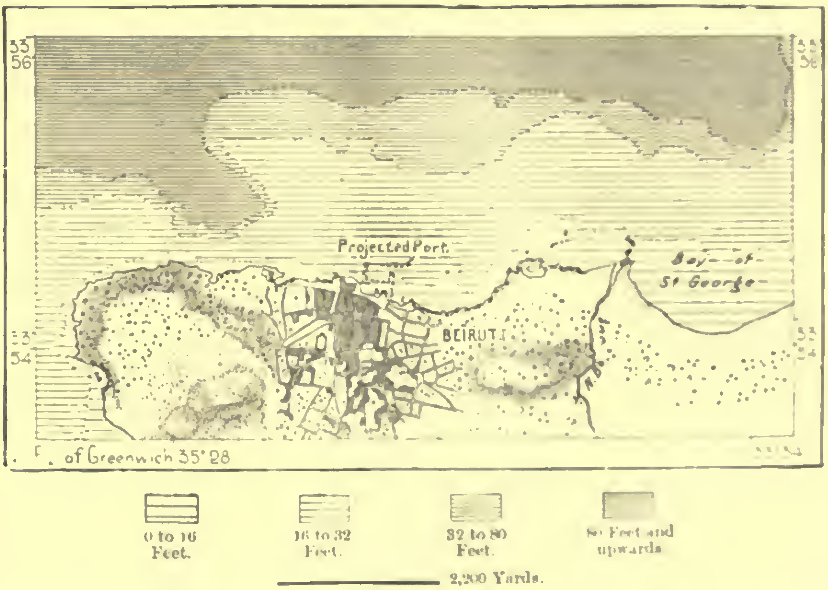
Beirut—Sidon—Tyre.

Beirut, the most commercial and largest city on the Syrian coast, and which presents a magnificent panoroma, almost rivalling those of Naples and Constantinople, is also a very ancient place. For the Phœnician *Berytus*, founded by the god El on the same day as Byblos, claimed to be the first that "Time," created with it, beheld on the face of the earth. But the "Root of Life," the "Nourisher of Cities," the "Primitive Queen of the World," as its titles ran, stood in Phœnician and Roman times more to the east, near the river now known as the Nahr-Beirut, moving gradually westwards in the direction of the most conspicuous headland north of Mount Carmel The coast itself is so badly sheltered that vessels lying at anchor in the roadstead frequently suffer during stormy weather. The city, which is unenclosed, skirts the beech for some miles, and spreads inland along the advanced spurs of the hills, which are themselves covered with hundreds of villas surrounded with gardens and palm-groves. On the west the plantations are encroached upon by dunes of red sand, which stretch southwards to the magnificent pine-forest which is the pride of Beirut, and from which the city probably takes its name.

Like Smyrna, Beirut has already assumed a European aspect. It has a considerable colony of foreigners from the west, whose speech and dress have been adopted by thousands of Levantines, Greeks, and even Syrians, settled here. About half of the population consists of Christians of various sects—Maronites and Latins, United Armenians, Orthodox and Catholic Greeks, Protestants of every denomination. In the streets elegant equipages are intermingled with convoys of camels; on the "French" route, which winds in easy gradients up the escarpments of the hills, carts and diligences are seen in strange contrast with the pack-mules and asses plodding along the dusty side-paths. Being the outport of Damascus, Beirut receives all the produce of the villages strewn in hundreds over the terraces of Libanon—the "golden wine," the fruits, the wools, raw silks, and cocoons, of the thrifty rural population. The import trade has also greatly increased of late years,

Fig. 179.—Beirut.

Scale 1 : 90,000.



and the exchanges now amount to considerably over £2,000,000 annually. The shipping, which exceeds 350,000 tons, is about equally divided amongst the mercantile navies of Great Britain, France, and Austria. Owing to the increased size of the vessels now frequenting Beirut, a new harbour has become indispensable. According to the plan proposed by M. de Perthuis, a large portion of the present shore with its rocky creeks and reefs would be cleared and dredged and protected by breakwaters, by which accommodation would be afforded to a shipping of about 200,000 tons annually.

European influence is apparent as much in the schools as in the trade of Beirut. Famous during the Roman epoch for its university of jurisprudence, it is no less so now for its educational establishments founded by the various religious communities and supported by subsidies from abroad. Two of these institutions, provided

with observatories, museums, workshops, and printing-offices, claim the title of university, and are connected with schools of medicine. The American College stands outside the city on the western headland commanding the roadstead, while the vast establishment of the Jesuits lies in the heart of the town. Nearly everything is modern in Beirut, and of its old monuments nothing is now to be seen except fragments of pavements, columns, sarcophagi, and in the gorge near the mouth of the Nahr-el-Kelb, numerous bas-reliefs and inscriptions of all epochs. A portion of this stream is now brought to Beirut by a recently constructed aqueduct, and traces have been discovered of another channel, which had been carried across the bay on a double or triple row of arches. The modern hydraulic works on the right bank of the Nahr-el-Kelb brought to light in 1878 some interesting cuneiform inscriptions enumerating the provinces subject to Nabuchodonosor. East of the city, on a spur of the Libanon enclosed by the deep valley of the Nahr, the hamlet of *Deir-el-Kalah* marks the site of a large temple dating from the Græco-Roman period. It had evidently been erected on the still older foundations of a Phœnician sanctuary, whose enclosures may be recognised by their huge blocks, several yards high, mingled with the more recent masonry.

Deir-el-Kamar, capital of the Druze country, but now inhabited by Christians, lies in the heart of the mountains on a lofty terrace about 3,000 feet above the sea. From this elevated position it commands the course of the Nahr-el-Kadi, or Nahr-el-Damur, which falls into the Mediterranean between Beirut and Saida. The "Convent of the Moon," as its name implies, doubtless in reference to a church of the Virgin, so often symbolized by the crescent, is not so much a town as a group of villages and hamlets scattered over the terraces above those astonishing hanging gardens, which are here supported by masonry built into the side of the hill. The women of Deir-el-Kamar are mostly occupied with weaving those robes of brocaded silk which the Druze chiefs are fond of parading on state occasions. Farther south and on the opposite side of the ravine, a steep crag is crowned with the *Beit-ed-Din* (*Bheddin*), the palace of the famous Druze prince Beshir, who maintained an almost independent position till the arrival of Ibraham Pasha and his Egyptians in 1839. This building, now occupied by the Governor of the Libanon, is a most remarkable Moorish edifice, noted for its graceful arcades, elegant domes, and varied structures piled in terraces one above the other, each with its turrets, galleries, and gardens.

South of Beirut follow two cities which, due regard being paid to the difference between former and present times, certainly played a vast part in the commerce of the Old World. But both alike, *Sidon* (*Saidda*) and *Tyre* (*Sur*), are now reduced to very modest proportions. Sidon, confined within dilapidated ramparts, has no longer even a harbour accessible to anything larger than the local Arab craft. The northern basin has silted up, although if cleared out it would form a sort of natural dock, enclosed on two sides by rocks and reefs, and in the north-east by a bridge with nine pointed arches connecting the picturesque Kalat-el-Bahr, or "Sea Castle," with the mainland. This basin communicates through a now almost filled-up channel with the southern port, which is too exposed to afford safe

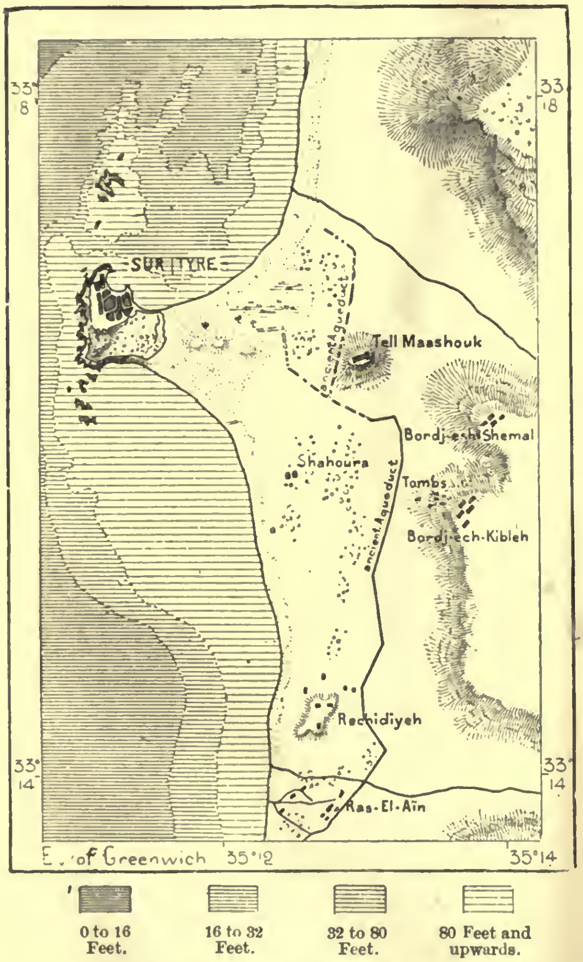
anchorage to the shipping. The modern town, inhabited by Maronites, Greeks, Metualis, Levantines, and Sunnite Mussulmans, is largely built of materials drawn from the old city. A small museum stands near the beach on the northern harbour, which even so recently as the seventeenth century was the entrepôt of trade with France and Spain. Although there are no monuments dating from the time when Sidon was the metropolis of the vast colonial empire of the Phœnicians, it at least still remains the "Flowery City" of former times. No other Syrian town, except perhaps Damascus, is encircled by more beautiful gardens, none produces more choice fruits or lovely flowers. The mean annual yield of its gardens is estimated at from £250 to £300 an acre, and its orange trade now rivals that of Jaffa itself.

Fig. 180.—Sidon.
Scale 1 : 23,000.

In the necropolis stretching south-eastwards along the foot of the limestone cliffs, are found the most remarkable monuments of ancient Sidon. Such are the walls, caves, and sarcophagi, besides the tomb of King Eshmunazar, in the purest Egyptian style, but with a precious Phœnician inscription. This important historical monument has lately been transferred to the Louvre. In the immediate neighbourhood of the town, the beach, running north and south, is everywhere encumbered with huge heaps of shells left by the manufacturers of the purple dye which at one time constituted the most famous and lucrative branch of Sidonian industry. One of these mounds, composed exclusively of the *murex trunculus*, used for dyeing coarse materials, is no less than 400 feet long, with an average height of 26 to 28 feet. Others, which are very numerous, consist of the debris of the *murex brandaris* and *purpura hemastoma*, used only in dyeing more costly fabrics. A town lying on a fine sandy beach to

the north of Sidon had taken the name of *Porphyrion*, that is, the "Purple City," from its extensive dye-works. Here, according to the local Jewish and Mussulman tradition, the prophet Jonas was cast ashore, whence the name of *Khan-Nebi-Yunas* given to the neighbouring village. When their vast maritime trade began to decline, the Sidonians turned their attention to the industrial arts, and soon became the most renowned craftsmen in the world. "Skilled in all things," according to the Homeric expression, they became as famous as were afterwards the Venetians for their glass-works which were situated at *Sarepta*, a three hours' journey to the south near the modern village of *Sarfend.*

Fig. 181.—Tyre.
Scale 1 : 84,000.



Tyre, the "daughter" and rival of Sidon, is a still more decayed place, where it is difficult to recognise the great city supposed to have been founded by Baal himself. At present it occupies only a small portion of the rocky islet which held out for ten years against the Assyrians under Salmanasar and Suryakin, for thirteen against Nabuchodonosor, and arrested the progress of Alexander for seven months. West of the islet, to which the city was probably indebted for its name of Tyre, that is, the "Rock," some débris, visible beneath the transparent waters, appear to be the remains of an ancient town built on a terraced embankment, and either swept away in a storm or swallowed in some local subsidence of the land. Over half a mile to the north is seen a reef formerly connected with Tyre by a dyke, of which every vestige has disappeared; and the same fate has overtaken the pier or breakwater which towards the south connected other islets in a continuous rampart stretching in the direction of the Ras-el-Abiad, or "White Point." But the causeway constructed by Alexander to connect the island with the mainland still exists, its preservation being due to the sands brought by the winds and currents to consolidate it on

both sides. This causeway has thus grown into an isthmus 2,000 feet broad at its narrowest part, above which the sands have here and there formed low dunes or hills.

Beyond some graves, which have mostly fallen in, nothing is to be seen of *Paleo-Tyre*, the continental city that stretched for a distance of 7 miles north and south between the mouth of the Orontes and the copious springs of Ras-el-Ain. One of the tombs in this district is associated in the local traditions with the name of Hiram, the renowned royal builder, whose memory still presides at the gatherings of the "masons" who have undertaken to reconstitute the world. The same traditions attribute to Solomon some old reservoirs still filled with the abundant overflow of the Ras-el-Ain springs, which are thence distributed in a thousand channels over the plain, and which formerly supplied a now ruined aqueduct running northwards in the direction of the Maashuk mound. Here it ramified into two branches, one of which penetrated to the insular city, while the other was carried northwards to the neighbouring coast-stream.

Although small, the present Tyre, inhabited by Sunnites, Metualis, Jews, and Greeks of both rites, still enjoys a certain prosperity, thanks to its export trade in cotton and tobacco, shipped in the modern port, which is a mere inlet of the old northern harbour. The excavations undertaken in 1874 amid the ruins of the ancient cathedral in search of Frederick Barbarossa's tomb, brought to light some magnificent single and double columns in granite and Egyptian syenite.

The valley of the Leontes, or Kasimiyeh, the products of which are exported through Tyre, has no towns in its lower reaches. No centres of population occur, even along its upper course, until we reach the Bekaa depression and the region lying beyond the sources of the Leitani. Here the largest and most industrious place is *Zahleh*, inhabited by Syrian and Greek Christians, and built in amphitheatrical form on the slopes of a hill intersected by the precipitous bed of a mountain torrent. Its name recalls a "landslip," during which it descended from the higher level of the escarpments rising northwards in the direction of the Jebel-Sannin. Zahleh is surrounded by vineyards, and all the rivulets in the neighbouring plain are fringed with poplars. Forming an important intermediate station between Beirut and Damascus, it is inhabited chiefly by muleteers and leaders of caravans, who enjoy a universal reputation for their trustworthiness.

Baalbek—Damascus.

Baalbek is not, as might be supposed from many popular descriptions, the simple débris of a ruined temple standing in the midst of the wilderness. It is rather a small town with its Arab khan, a hotel, and a telegraph station for European travellers. A wall nearly 2 miles in circumference encloses several hundred houses, inhabited, as elsewhere in Syria, by members of various religious sects. Although its decadence is sufficiently explained by wars and misgovernment, it is nevertheless surprising that a larger population and a more active trade have not been maintained in a city so happily situated in this favoured region of Cœle-Syria, on the scarcely perceptible waterparting between the Leitani and Orontes

basins. Nor can there be any doubt that Baalbek must sooner or later again take its place among the foremost cities of Syria. The old terraced lands visible on the surrounding slopes await only the tiller's hand to bloom and blossom again. A portion of the plain has already been bought up by European speculators, who here cultivate cereals, beans, cotton, and the vine. Baalbek will soon be connected with the Mediterranean by a carriage-road branching from the main route between Beirut and Damascus.

The ruined monuments which are the glory of the "City of the Sun," lie towards the west. Here a circular dilapidated temple occupies an isolated position on the plain, beyond which are grouped together all the other edifices—Temple of the Sun, Temple of Jupiter, propylæ, cyclopean walls—collectively forming "perhaps the finest group of buildings in the world." * Yet what still remains is but little compared with what has been overthrown by earthquakes or the hand of man. The shafts lying scattered about are more numerous than those still standing with their Corinthian capitals and entablatures against the blue sky. These, however, are of imposing magnitude, and their fine proportions, the great height of the columns and wealth of sculpture are specially noteworthy. But in the presence of the cyclopean walls the observer is struck with amazement at the enormous blocks which the hand of man has here been able to manipulate. These masses are unrivalled in Asia for their vast dimensions, so vast that it is difficult to understand how they could have been placed in position even by thousands of workmen aided by every mechanical appliance. Built into the walls are huge monoliths fully 71 feet long, and several yards broad and deep, and amongst them are some estimated at over 10,000 cubic feet in bulk, and weighing not less than 800 tons.† A single stone still lying in the quarry over half a mile off, which was doubtless intended to support the inner colonnade, is 15,000 cubic feet in bulk, and weighs upwards of 1,000 tons, while a defective obelisk cast aside in another quarry is over 98 feet long. The largest menhir in Britanny weighs no more than 250 tons, less than one-fourth of the largest Baalbek monolith, which is exceeded in Europe only by the Anteguera dolmen with a bulk of 33,000 cubic feet. The erratic boulder supporting the equestrian statue of Peter the Great in St. Petersburg weighs about 1,500 tons. Compared with these gigantic blocks, worked with such simple mechanical contrivances as ropes, levers, and rollers, how insignificant appear even the huge masses of concrete piled up on our modern breakwaters.

Damascus, whose strategical and commercial position is analogous to that of Baalbek, has not declined like the city of Cœle-Syria. Formerly inferior to Antiochia alone, it is now the first city in Syria, and in the whole of Asiatic Turkey it is exceeded in population only by Smyrna. Hence its title of "Esh-Sham," or "Syria," as if the whole province were here concentrated. It stands in an extremely fertile and abundantly watered plain, directly facing the depression separating the Hermon from Anti-Libanon. Through the Bekaa it thus commands all the northern and central positions through the Orontes and Leontes Valleys

* Loret, "Tour du Monde."
† Steppe, "Munich Geographical Society."

respectively. "Damascus is the eye of the East," said the Emperor Julian. But

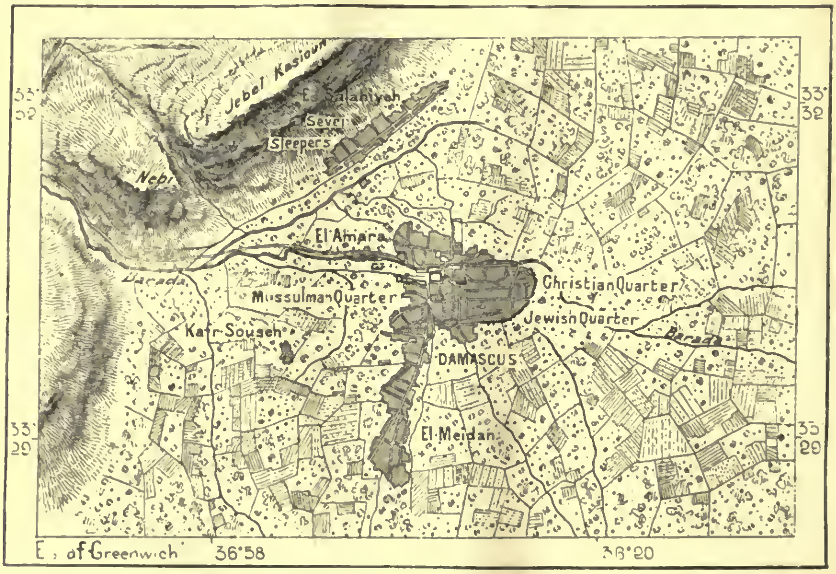
Fig. 182.—Damascus—View taken from the Christian Quarter.

besides commanding the seaboard and connecting it commercially with the Mesopotamian plains, Damascus occupies a completely independent position, rendering it

self-supporting, even were its communications with the sea entirely interrupted. During the wars of the Crusades, it was vainly attacked by the Franks, who were admitted into the place only for a few years in the character of allies. It was the residence of Salah-ed-Din (Saladin) and Melek-ed-Dhaher-Bibars, the two most renowned opponents of the Crusaders, whose tombs are still shown in the neighbourhood of the great mosque. At this time Damascus was a famous centre of learning, celebrated especially for its school of medicine.

Esh-Sham claims to be the oldest place in the world, and in any case it already figures in the list on the walls of Karnak amongst the cities reduced by Thotmes III. nearly three thousand eight hundred years ago. According to the Arab legend, the red soil of the surrounding plain supplied the "virgin earth" from which the

Fig. 183.—Damascus.
Scale 1 : 120,000.



2½ Miles.

first man was made, and which is still supposed to possess miraculous medicinal virtues. Other traditions associate the neighbouring gardens with the Paradise of Genesis, and point out where was shed the blood of Abel, or where Noah's Ark was built. The house of Abraham is also confidently shown, and the local Jews gather every Sabbath in the synagogue erected over the tomb of Elias.

But, however important in the history of the Jewish and Mohammedan religions, Damascus is not less so in the early records of Christianity. Here Paul was converted to the new faith, and began the mission to the Gentiles which was destined to have such far-reaching consequences for mankind. No less than two places are pointed out as the precise spot where the vision took place which suddenly transformed the fiery persecutor into a zealous apostle. One of the many caves of the "Seven Sleepers" is also to be seen on the slope of the neighbouring

mountain. Damascus even shares in the sanctity of Mecca and Medina, for at this place the largest caravan of pilgrims yearly assembles to visit the holy places. Thousands of the faithful accompany the sacred camel, bearer of the Sultan's gifts for the Kaaba.

The sight of Damascus is one of the marvels of the East. From the hills commanding it on the north and west, it appears white and rose tinted in the midst of the surrounding masses of verdure. The suburbs, stretching away amid the garden-plots, are here and there hidden from the view by clumps of forest-trees, while the clear waters of pond or reservoir sparkle beneath the clusters of feathery palm. But on penetrating into the tortuous streets the contrast is all the more depressing. As in other Oriental cities, even the finest houses present a cheerful aspect only in the interior, where they are disposed round flowing waters and flower-beds. The city, properly so called, is of oval form, with the main axis running west and east, and occupied in the north-west corner with a square citadel. It is traversed in its entire length by the "Straight Street," a thoroughfare which has replaced a superb avenue of columns erected during the Roman period. This is still the centre of traffic, full of life and movement, but leaving the adjoining side streets almost deserted. At night the various quarters are separated from each other by gateways, which convert them into so many distinct towns. Northwards the El-Amara suburb stretches along the opposite bank of the chief branch of the Barada, while the Meidan, a much larger quarter, extends for over a mile along the southern highway leading to Mecca.

The chief edifice in Damascus is the "great mosque," originally a Roman basilica, some of whose columns still remain, either in detached groups or built into the walls of the mosque and adjacent bazaars. Although the Christians have only of late years obtained permission to enter this building, they hold it in great veneration, for it was formerly their cathedral, and still contains, as they suppose, the remains of some of their saints, amongst others those of John and Zacharias. One of its three minarets is even called the "Tower of Jesus," and here, according to the local belief, the Son of Man will appear on the last day to judge the quick and the dead. These lofty minarets, dating from the time of the Ommiades, and famous in the history of architecture, served as the models of the Giralda in Seville, of the belfry of Saint Mark's in Venice, and of the Torrazzo in Cremona.

As a commercial centre, Damascus is as indispensable for Central as is Aleppo for Northern Syria. It sends every year five or six caravans to Bagdad, while others are equipped for Birejik, Rakka, Bassora, Nejd, and other parts of Arabia. But of the wares thus distributed throughout the East few are of local manufacture. Of these the most important are some highly esteemed silken fabrics, gold filigree work, and saddlery. Since the visit of Tamerlane, who butchered nearly all the inhabitants, Damascus has ceased to produce the highly tempered blades so famous during the first centuries of the Arab rule, and these objects are now more frequently seen in the bazaars of Cairo than in those of the Syrian city. But in the palaces of Damascus and Aleppo are still preserved perhaps the finest old Chinese ceramics, imported during mediæval times by the Bokhara dealers. In these articles Syria is

said to be richer than the Middle Kingdom itself. The essence of roses, at one time so highly appreciated, is no longer prepared on the banks of the Barada, and the southern slopes of the Balkans, and the Fayum district in Egypt, now remain unrivalled in the production of the costly attar.

The various trades and professions are distributed in Damascus amongst the religious communities, which here mostly represent so many distinct nationalities. The Jews, different in their origin from the "Spanioles" of the coast towns and from the German and Russian Hebrews who have recently immigrated into Palestine, are the direct descendants of the Beni-Israel of the Promised Land. The Christians, three times more numerous, possess no common bond of union, and during the massacres of 1860 they mostly allowed themselves to be butchered unresistingly. On that occasion the so-called Arab "Greeks" alone fought hard for their lives. At present, notwithstanding much smouldering fanaticism, the foreigners yearly visiting the place to the number of several hundreds, have nothing to fear from the populace, and move freely about in the bazaars and suburbs.*

Salahiyeh, a long suburb winding up the advanced slopes of the Jebel Kasium, north of the plains, may be regarded as a distinct town separated from Damascus by a space of nearly 2 miles. Rising above the vapours which at times hang over the humid plain, Salahiyeh enjoys a more healthy climate than the lowland city. Here the chief schools were formerly established, and here most of the Europeans at present reside, while others retire to *Budan*, which lies more in the hills on the slope of one of the chief summits of Anti-Libanon, whence a magnificent prospect is commanded of the marvellous plain. All that the earth contains of pleasure or beauty the Arab imagines summed up in the one magic term, El-Guta, as he calls the vast garden encircling Damascus. According to the natives, the irrigating waters here ramify into seven streams and three hundred and sixty five-canals, diffusing fertility over thirty thousand gardens. Thanks to this abundance of water, and to the diversified climate caused by the neighbourhood of cool mountains and burning deserts, the most varied floras are found here concentrated in charming contrast. The oak and walnut flourish by the side of the olive and cypress, while the apple overshadowing the fragrant rose-bush is itself sheltered by the tall palm. Of all the fruits cultivated in these productive gardens, the most highly prized are the plums.

Palmyra—Philadelphia—Petra.

The village of *Harran-el-Awamid*, lying east of Damascus, not far from the great Bahr-el-Ateibeh marsh, is said to have formerly been an important city, by biblical commentators identified with that in which Abraham dwelt.† But still farther east, in the midst of the Hamad wilderness, must be sought the grand ruins of antiquity. *Tadmor*, a chief station in the desert between Damascus and the

* Approximate population of Damascus, according to religions: Sunnite Mussulmans, 125,000; Metualis, 4,000; Greek Christians, 7,000; United Greeks, 7,000; Syrian and other Christians, 3,000; Jews, 6,000; Sundries, 8,000. Total, 160,000.

† Mrs. Beke, "Jacob's Flight."

RUINS OF PALMYRA—THE COLONNADE.

Euphrates, has preserved the name by which it was known when first mentioned in history, at the time of Hiram and Solomon. The alternative designation of *Palmyra*, unknown to the natives, is itself merely the Latin translation of Tadmor, "City of Palms." But as a city it no longer exists, and the wretched hamlet which has succeeded it is concealed within the ruins of a temple, the entrance of which is now closed at night against the marauding Bedouin. Yet even so late as the twelfth century, when visited by the traveller Benjamin of Tudela, it still contained a considerable population, including two thousand Jewish merchants.

The city of Zenobia is no longer anything more than a narrow oasis approached through the dry beds of wadys. The traveller is even obliged to make a provision of water while crossing the intervening wastes. It would be impossible to understand the amazing development of Palmyra during the period when its empire was spread over Syria, Asia Minor, and Mesopotamia, unless we suppose that it was supplied with copious springs, and its plains watered by a considerable stream. Ptolemy tells us, in fact, that a river comparable to the Chrysorrhoas (Barada) of Damascus flowed by its temples, and down to the tenth and eleventh centuries mention continually occurs of the running waters, the fields and orchards of Palmyra. Even in the middle of the last century the English traveller, Wood, saw two small rivulets at Tadmor; but the water had become so sulphurous that it could not be drunk until it had settled down. At present a solitary streamlet flowing south of the city soon runs dry at the foot of the chalk cliffs. The soil has evidently become dryer; the desert has encroached on the oasis, and Palmyra for a time disappeared altogether. After a search of thirteen years some English explorers again brought it to light in 1691, and for many years afterwards it continued to be of difficult access across the trackless desert.

Palmyra was a city of colonnades, and even still, although most of the buildings have been overthrown by earthquakes, the horizon seems bounded on all sides by lines of pillars. Of the four hundred which originally adorned the Temple of the Sun, as many as fifty are still erect; and of the one thousand five hundred which formed the grand central avenue running for four thousand feet between the palaces, one hundred and fifty have been preserved in position. But not one of the statues remains which stood upon pedestals attached to the shafts. On the numerous tombs a large number of inscriptions have been found in the Aramean language, which differs little from modern Syriac; some are bilingual, in Greek and the Palmyrene dialect.

In the Trans-Jordan region south of Damascus all the old cities have either fallen to ruins or sunk like Tadmor to mere hamlets. Yet at one time towns were counted by the hundred in this district, which is now occupied chiefly by Bedouin encampments and some recently founded settlements of the Druzes from Libanon. In many places columns, triumphal arches, and tombs like those of Palmyra break the monotony of the view, and here monuments dating from the first centuries of Christendom are scarcely less numerous than in North Syria itself. West of the Hauran abandoned cities and groups of fine buildings with carved stone doors and windows, and here and there even with roofs still standing, follow in quick succession. *El-Musmiyeh*, *Shakka*, and *Shubba*, are mere ruins; *Kanawat* and *Sueideh* are small

villages surrounded by sumptuous remains. Here the vine has ceased to be cultivated, but the surrounding slopes are still girdled with the terraces where it entwined its tendrils amongst the branches of fruit-trees. Farther on *Bosra*, the *Bostra* of the Romans, lying at the south-west angle of the Hauran highlands, on a wady flowing through the Yarmuk to the Jordan, presents the aspect of a metropolis, thanks to its massive Arab citadel, imposing ramparts, and mosques. A theatre, triumphal arches, arena, porticoes, and palatial remains are grouped within the now almost uninhabited enclosures, where a few wretched Bedouin hovels are over-

Fig. 184.—Jebel Hauran and Bosra.

Scale 1 : 500.000.

12 Miles.

shadowed by the ruins of a superb cathedral. West of Bosra, and not far from *Derat*, the ancient *Edrei*, an extensive underground city cut in the live rock, has been explored by Wetzstein. Beyond it, on the plateau overlooking the east bank of the Jordan, *Umm-Keis* (*Mkeis*), the ancient *Gadara*, still preserves the remains of one of those "straight avenues" or colonnades which are met in so many Syrian cities, dating from the first century of the Christian era, between Pompeiopolis and Tadmor. Of all these cities of the wilderness, *Jerash*, the *Gerasa* of the Romans, lying north of the upper valley of the Jabock torrent, has next to Palmyra best

preserved these avenues, with the surrounding forum and outbuildings. Here the main avenue, intersected at intervals by other streets also lined with colonnades and statues, is nearly three-quarters of a mile long, and it is still fringed with over two-hundred vertical or inclined pillars.

Es-Salt, the chief modern town in the Trans-Jordan region, was also probably an ancient place, the *Ramoth-Galaad* of the Hebrews. This capital of the Belka district and residence of a Turkish military commander lies on the southern slopes of the Jebel-Osha, whence it commands the whole surrounding country.

The ruins of *Amman*, lying near the sources of the Jabock torrent, recall the ancient kingdom of the Ammonites, hereditary enemies of the Hebrews. Here stood their capital of Rabbath-Amman, which by the Romans was re-named *Philadelphia*. Few strongholds occupy a more formidable position than this ancient Ammonite citadel, perched on a crag isolated on all sides except the north-west, where the hand of man had completed the work of nature. South of the castle stretched the city properly so called, and on the opposite side of an intervening wady are still visible the semicircular rows of steps belonging to one of the largest and best-preserved theatres anywhere erected by the Romans. The surrounding hollows have become the camping-ground of some wretched Cherkess families, removed by the authorities to this district, whose climate differs so greatly from that of their Caucasian homes.

Of *Hesban*, the ancient *Hesbon* of the Amorites, who were so often in arms against the Hebrews, nothing now remains except shapeless ruins. But farther east in the same district of the plateau stood the city of *Ziza*, famous for its large reservoirs and ensilage pits. Near this spot, on the route of the Mussulman pilgrims, Tristram has discovered the sumptuous remains of an isolated palace which the Arabs have named *Mashita*, but the builders of which are unknown. The surprisingly rich sculptures of the façade, more varied even than those of the Alhambra, are attributed by Fergusson to the Sassanides. The edifice is supposed to have been erected at the beginning of the seventh century by Chosroes, after one of his victorious expeditions into Syria and Egypt.*

Mashita lies at no great distance from the sources of the Zain-Merka, a deep wady which in the neighbourhood of the Dead Sea receives the hot sulphurous waters of the Callirhoe, so named by Herod. The vapoury cascades of this pleasant stream sparkle amidst the surrounding oleander-bushes, beyond which they are collected in a single channel shaded by the palm The concretions precipitated by the water have developed a series of terraces along the face of the cliff, one of which, containing the petrified trunks of palms, is no less than 160 feet thick. A special local flora flourishes in the vicinity of these springs, whose temperature varies from 180° to 190° F. The thermal stream has forced its way by erosion round a basalt barrier formerly blocking the valley.

Rabbath-Moab, the present *Rabba*, ancient capital of the Moabites, is far less rich in antiquities than the rival Rabbath of the Ammonites. But several other cities of the Moab country have yielded many treasures to the archæologist. The

* Tristram, "Land of Moab."

most remarkable discovery made in this region is the famous stone, or pillar of Mesa, king of Moab, which was found in the middle of the vast ruins of *Dhiban*, a town situated to the north of the Arnon torrent. Fortunately saved from destruction by M. Clermont-Ganneau, but not intact, this precious monument, which is now in the Louvre, bore an inscription of thirty-four lines in a dialect differing little from the Hebrew, and engraved in characters resembling the Phœnician type. The language spoken by Mesa some two thousand eight hundred years ago bears witness to a perfect parity of ideas and usages between the Moabites and their Israelitish neighbours. The inscription on this stone reads like a chapter in Judges, only the name of Jehovah is replaced by that of the god Kamosh.

South of Rabbath-Moab the most considerable place is Kerak, which lies near a wady flowing to the Dead Sea on a steep rock encircled by a rampart. At the southern extremity of this rock, which is isolated by a deep cutting from the plateau, stands one of the strongest citadels erected by the Crusaders during their wars with the "Infidel." Here also stood the still more massive castle of Moab, mentioned in the Bible under the name of *Kir-Hareseth*, or "City of the Hill." Kerak held out against Saladin, and again in 1844 against Ibrahim Pasha. Beyond it stretches the red land of Idumæa, or Edom, where all the cities are in ruins, and not a single inhabited town is now to be seen. The Christian inhabitants of Kerak themselves differ little from the Bedouins of the wilderness, and like them dwell chiefly in tents.

Petra, which, under the name of *Selah*, was capital of this region from the very dawn of history, is the city of "Stone" in a pre-eminent sense. Discovered, so to say, by the traveller Burckhardt in the year 1812, this city lies in the Wady Musa (Wady of Moses). a sort of cirque enclosed on all sides by rocks and mountains. East and west the heights rise abruptly from the ground; towards the north the horizon is bounded by a continuous ridge furrowed by deep ravines, while the slopes fall more gently southwards, although even in this direction the basin is closed in by a steep sandstone wall. Access is gained to this basin by a gorge a few yards broad, a mere fissure in the rocks rising from 280 to over 300 feet on either side, and even at noon admitting but a few rays of crepuscular light. The defile is still crossed by a Roman archway, resembling those by modern engineers thrown across deep railway cuttings. West of Petra another gorge receives the intermittent waters of the wady, whence they are carried either to a bottomless abyss, as the Arabs assert, or more probably deflected to the Arabah depression, as indicated by the relief of the land. But no modern explorer has hitherto penetrated to the extremity of the valley, which is overgrown by a dense mass of oleander-bushes.

An isolated column, tombs, and the remains of other buildings, are scattered about the cirque and its approaches. But the most remarkable monuments are those cut in the rock itself. To the Syria of the Roman epoch Petra stands in the same artistic relation that Ellora and Ajanta do to the India of Buddhist times. Temples with their colonnades and façades are let into the red cliff, while the face of the rock is everywhere carved into palaces or tombs, superimposed one above

another. From the earliest recorded times the inhabitants of the district were "Horim," that is to say, Troglodytes, whose first rude grottoes, shapeless caverns hollowed out of the hillside, have been transformed to architectural galleries decorated with statues and bas-reliefs. Then the whole population perished or disappeared, and the city of the wilderness became a vast necropolis, which has not

Fig. 185.—Petra and the Arabah Depression.

Scale 1 : 300,000.

6 Miles.

yet been entirely explored. West of Petra rises the crest of Mount Hor, venerated alike by Christian, Jew, and Mussulman as the tomb of the high-priest Aaron.

Topography of Palestine.

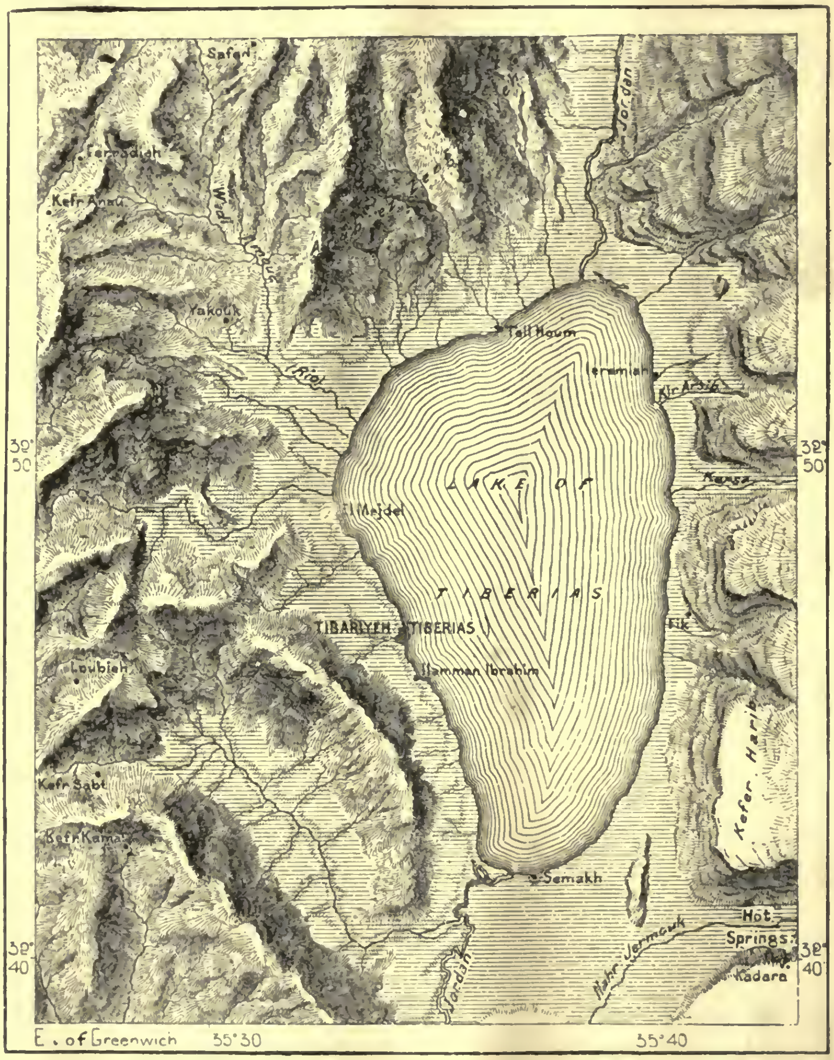
The valley of the Jordan is relatively well peopled only in its northern section, where the running waters flow in abundance, where the slopes of the hills are clothed with verdure, and where the summer heats are tempered by the elevation of the land. Here *Rasheya* and *Hasbeya*, standing on cultivated terraces in the hilly and fertile region of the Wady-et-Teim, forming the western slope of Mount Hermon, almost deserve the name of towns. But few traces now remain of *Banias*, the city of the "god Pan," the ancient *Cæsarea*, famous for its proud citadel at the very source of the Jordan, above the chasm into which were hurled the victims immolated at the sacrificial altar.

Far less densely peopled than the Upper Jordan Valley, the basin of Lake

Galilee has now only a single centre of urban population. *Tabariyeh*, the ancient *Tiberias*, lying on the west side of the lake, is now a mere *tell* or mound, overgrown with brushwood. *Tell-Hum*, another hillock at the north-west corner of the lacustrine lake, is supposed to indicate the site of *Kapharnaum*. For the Hebrews

Fig. 186.—Lake Tiberias.

Scale 1 : 280,000.



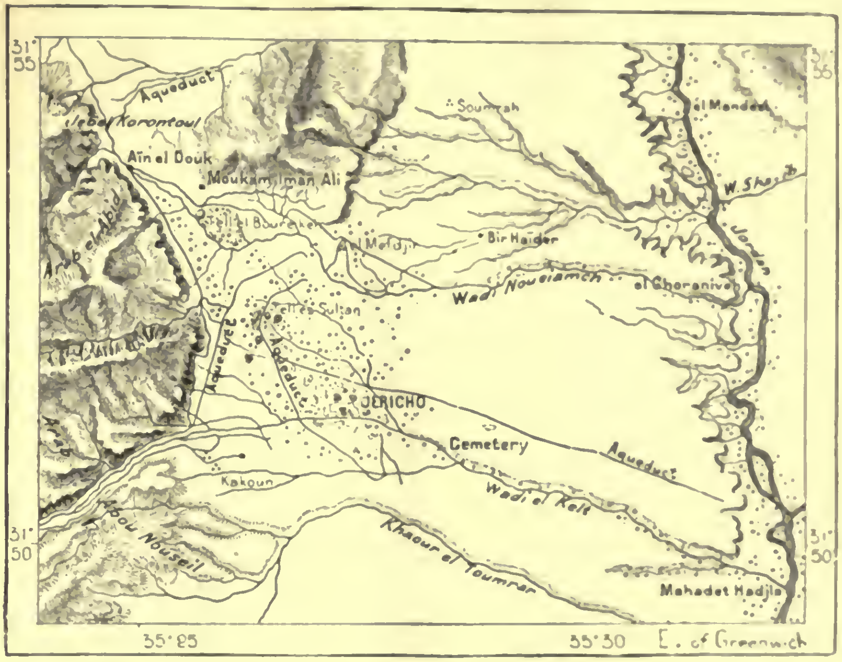
Below the level of the Mediterranean.

——— 6 Miles.

Tabariyeh is a sacred spot, whose Rabbinical school, famous throughout mediæval times, had succeeded to that of Jerusalem. The town, where is still shown the tomb of the great doctor and expounder of Holy Writ, Maimonides, is now people chiefly by Jews of Spanish and Russian descent, who here await the coming of the Messiah.

Safed, lying at the foot and on the slopes of a fortified hill near a wady flowing to Lake Tiberias, has also attracted a Jewish population, animated by the same expectation of a future liberator. To them the tremblings of the ground, frequent in this volcanic district, seem to be so many "signs" heralding the advent of their king. These underground disturbances have often been very disastrous, and in 1837 the whole Jewish quarter, built in amphitheatrical form on a steep incline, was overthrown, burying four thousand persons in the ruins of its houses, which

Fig. 187.—Jericho.
Scale 1 : 140,000.



were swept, with the accompanying landslip, like an avalanche down the precipitous declivity.

Emmaus—Jericho—Akka.

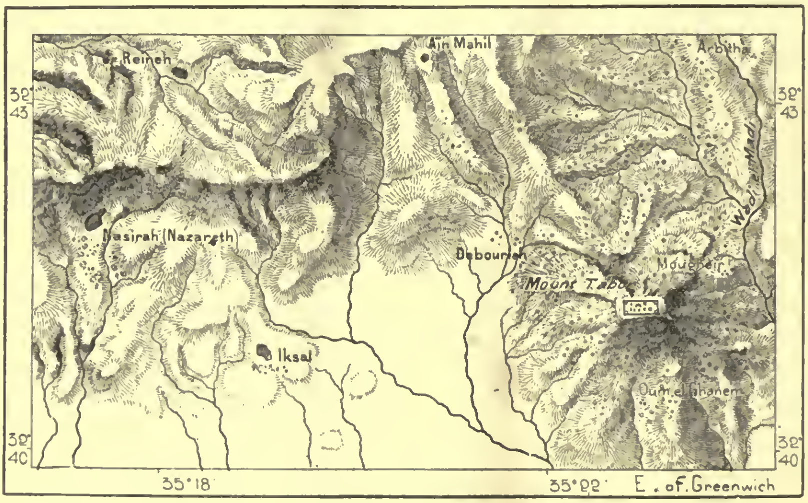
The thermal springs of the ancient *Emmaus* (*Hammam Suleiman* and *Hammam Ibrahim*), lying at a short distance from Tabaryieh, are much frequented. The undulating tract stretching west of them near the village of *Hattin* was the battle-field where Saladin gained the decisive victory which in 1187 secured to him the possession of Jerusalem. South of the hills of Tiberias in the fertile valley of the Wady-Jabul, one of the "Gates of Paradise," is situated the hamlet of *Beisan*, the ancient city of *Beth-san*, which held out against the Hebrew invaders and preserved its local cult for centuries. During the Roman period it was known as *Scythopolis*, a name doubtless due to a colony of "Scythians" who had settled here.

In the Ghor, or deep fissure of the Jordan between Lake Tiberias and the Dead

Sea, there are no towns. *Riha* (*Eriha*), standing on the site of the *Jericho* of Herod's time, which lay some distance to the east of the older Jericho destroyed by the Israelites on entering the land of Canaan, is now a mere group of hovels. The famous city, which after the Babylonian captivity became the second city in Judæa, which was the school of the prophets, and later on the residence of Herod I., perished with the destruction of the irrigation canals derived from the Jordan, and the copious spring of Elishah, or the Sultan (Ani-es-Sultan). It is no longer the "City of Palms," and has ceased to export the *caryopes*, or "date-nuts," of which it had once a monopoly. When it lost its date-groves, its sugar-cane plantations, and rose-gardens, Jericho also lost its inhabitants. But the population would doubtless return were the old system of irrigation works restored. Notwithstanding the pestilential fevers which now prevail, and which have proved fatal to many

Fig. 188.—Nazareth and Mount Tabor.

Scale 1 : 120,000.



2½ Miles.

explorers of the Holy Land,* it still continues to be one of the most frequented places in Palestine. Whole caravans of pilgrims, mostly Russians of the Orthodox Greek Church, flock hither to bathe in the holy waters of Jordan, and worship at the many hallowed spots in the district. Some devout Abyssinians also come to perform their forty days' fast in the grottoes of a neighbouring hill, in imitation of the fast of the Saviour in the wilderness. Hence the appellation of the "Forty Days" given to this rugged crag. Various tropical birds have settled in the valley of Jericho, and here are also now seen various plants of the Torrid zone from Sudan and the Sahara.

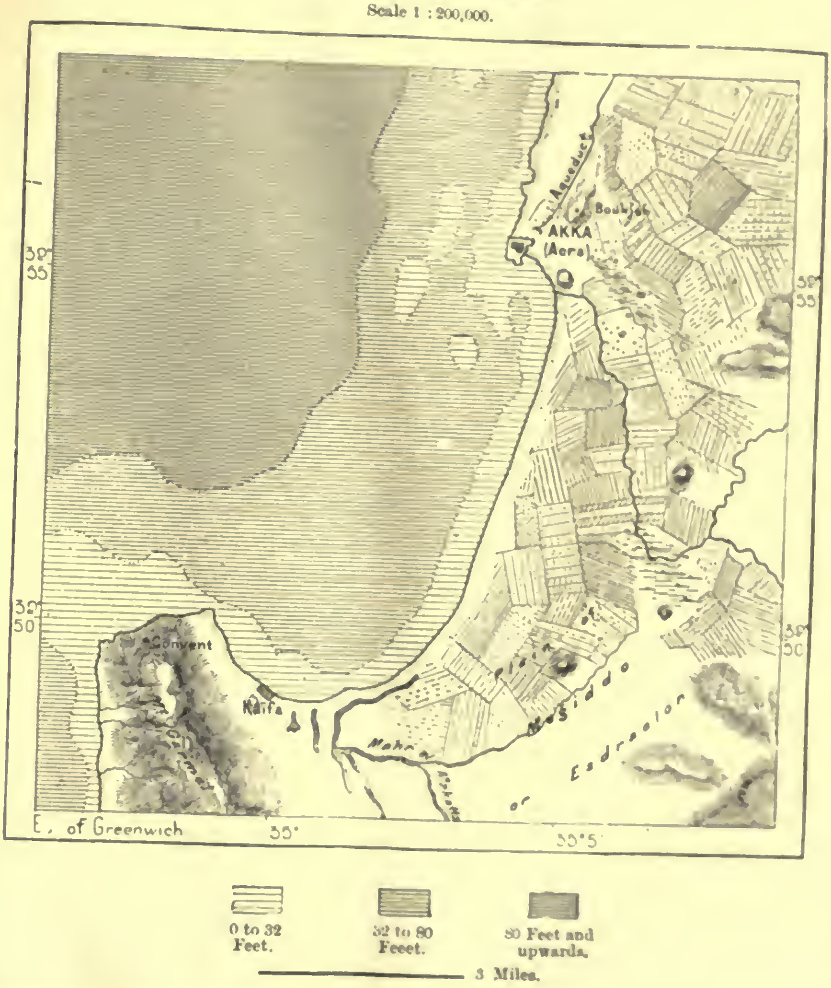
The land of Galilee, divided by its numerous mountain ranges into a labyrinth of secluded valleys, is almost destitute of towns. *Nazareth*, or *En-Nacira*, is its chief city, beyond the highland region, facing southwards in the direction of the plain

* Lieut. R. Conder, "Tent-work in Palestine."

of Esdraelon In any case it is indebted for most of its population to the hallowed memories awakened by its name. So recently as the beginning of the last century it was merely a wretched Mussulman village, which since then has gradually grown into a considerable town, thanks to the immigration of Christian settlers. Churches, convents, asylums, and schools of all "denominations" have sprung up in the two Latin and Greek quarters, while the Mohammedans have been compelled to remove towards the cultivated grounds in the south-east. Nazareth is one of the few cities

Fig. 189.—Akka and Kaifa.

Scale 1 : 200,000.



of Palestine provided with highways of communication, and is now connected by a carriage-road with Khaifa, at the foot of Mount Carmel.

Akka, or *St. John of Acre*, belongs like Nazareth to the province of Galilee, and like it is situated beyond the hilly districts. It occupies the rocky headland which on the coast forms the northern extremity of the semicircular bay limited southwards by Mount Carmel. The position of Akka, the Phœnician *Akko* and the *Ptolemais* of the Lagides, is naturally strong against the attacks of an enemy not

masters of the sea, and to this position it is indebted for its essentially military associations. The Hebrews never succeeded in capturing this Phœnician stronghold. During the Crusades it was repeatedly taken and retaken by the Christians and Mussulmans, and as the head-quarters of the military orders it acquired considerable importance. The knights of St. John even bequeathed their name to a place which they were finally expelled from in the year 1291. In 1799 Bonaparte besieged it in vain, and his fortunes suffered a first serious check under its walls, defended by a British fleet in the roadstead. Since then Akka has had to endure other assaults from Turks, Egyptians, and English, and in 1840 it was almost demolished by a British squadron. But fresh defensive works have since sprung up, as if to challenge fresh assailants.

The port of Akka, which in the hands of the Crusaders enjoyed a large trade, is now almost deserted. The harbour has silted up, and the few vessels which here ship cereals, fruits, and other local produce are obliged to anchor off the coast. *Khaifa*, lying at the foot of Carmel at the opposite side of the bay, has become a much busier place since the arrival of the three hundred Suabian "Templars" who have formed a flourishing colony in this district. Khaifa, which is now regularly visited by the Levantine steamers, is the outport of the plain of Esdraelon as far as Nazareth and the wealthy town of *Jenin*. In this plain one of the most important places is *Lejim*, the ancient *Legio* of the Romans, possibly the *Meghiddo* where was fought the great battle between the Egyptians and Hittites. Khaifa has been mentioned as a probable central terminus of the future railway system of Syria and Palestine. From this point it is proposed to construct one main line along the Upper Jordan valley to Damascus, while another is intended to be carried by easy gradients up to the plateau of Judæa.

Nablus—Samaria.

In the mountainous region of Samaria, south of the plain of Esdraelon, is situated the rich town of *Nablus* or *Naplus*, the ancient *Sichem*. Formerly the religious rival of Jerusalem, this place occupies a far more convenient position than the holy city of the Jews and Christians. Lying 1,900 feet above the sea, precisely at the water-parting line between the valleys draining west to the Mediterranean and east to the Jordan, abounding in copious springs, and surrounded with grassy plains, productive gardens and orchards, Sichem is one of those cities which, thanks to their situation and natural advantages, never fail to recover from every fresh disaster. Old as history itself, it nevertheless retains the name of Neapolis, or "New Town," given to it by Vespasian, and is thus one of the few places whose classic designation still survives. Above it rise two famous mountains—Garizim on the south, on whose precipitous summit the Levites, clothed in sumptuous robes, stretched their arms to implore blessings on the multitude; Ebal on the north, where were gathered rival sacrificial priests, calling down maledictions on the opposite faction. And in this struggle, which recalls the everlasting warfare between Ormuzd and Ahriman, how often the invokers of curses seemed to triumph! How

often the temple of Garizim was overthrown, and its orthodox defenders put to the edge of the sword! On the "holy mountain," Jupiter, the Mother of God, and Allah were successively worshipped; yet the older cult, which seemed swept away for ever, never failed to reappear. With a tenacity absolutely without precedent, the little sect has survived all these passing changes, and still holds together, faithfully preserving its primeval doctrines and traditions. Like the Jewish, Christian, and Mohammedan religions, it possesses its "bible," a manuscript of the Pentateuch and some other venerable documents, interesting alike to Hebrew and Christian dogmatists. Numbering altogether about one hundred and sixty souls,* these Samaritans of Nablus are distinguished by a special costume, a striking feature of which is their red turban. They carefully purify themselves from all

Fig. 190.—Nablus.

Scale 1 : 80,000.

impure contact, rigorously observe the prescriptions of their law, abstain from all manual labour on the Sabbath, and still offer sacrifices on Garizim according to the rites ordained in Leviticus and Deuteronomy. Like the Jews, they also await a Messiah, who shall one day descend on the holy mountain to resuscitate and lead the just into everlasting bliss.

Samaria, which although a less hallowed spot than Sichem, was nevertheless for a time the capital of the kingdom of the Samaritans, has lost its old name, and is now known by its Greek appellation of *Sebaste*, or *Sebastiyeh*, as it is pronounced by the natives. It certainly no longer deserves the title of the "August City;" but although now an obscure village, it still preserves the remains of one of those

* In 1881 the community consisted of 98 men and 62 women (Conder, "Reports, Palestine Exploration Fund," July, 1881.

"straight avenues" so common in the old cities beyond the Jordan. The direction of its colonnaded thoroughfare is even indicated by a few shafts still standing in their original position. Lying some thirty miles to the north-west of Sichem, Samaria, which is also surrounded by fertile plains, had the advantage of standing in an open country, with more easy access to the seaboard. Here its outport was another Sebaste, better known under the name of *Cæsarea* (*Kaisariyeh*) also conferred on it in honour of the Emperor Augustus. At this place the coast is fringed with dunes and indented with rocky inlets, one of which, provided with piers and breakwaters, became under Herod the busiest port along the whole seaboard of Palestine.

After the destruction of Jerusalem by Titus, Cæsarea was for some time the capital of Judæa, and the feasts celebrated on the occasion of its elevation to this rank were ushered in by the butchery of many thousand Jews in the arena. Repeatedly taken and retaken during the various wars by which Syria was subsequently wasted, Cæsarea was finally ruined at the end of the thirteenth century. At present it is scarcely visited except by the Arabs, who come hither in quest of the dressed stones required for the modern buildings of Jaffa, Ramleh, and Beirut. The enclosure, at one time occupied by the knights of St. John of Jerusalem, had been given by the Sultan to the Emperor of Germany.

Jerusalem.

In spite of its name, *Jerusalem*, the "Heir of Peace," owed its origin to its strategical position on a rock admitting of easy defence, and itself commanding the water-parting of South Judæa between the Mediterranean and Dead Sea basins. Wrested by King David from the Jebusites, the old fortress was converted into a powerful capital, which during the reign of Solomon soon became probably the most populous city in the whole of Palestine and Syria. But a few years after this epoch the "City of David" was fain to open its gates to the Egyptian hosts. Later on it was successively occupied by the Philistines, Arabs, and again by the Egyptians. Then came the Assyrians, by whom its temple was destroyed and its walls razed to the ground. After the Babylonian captivity the Jews rebuilt the "House of God," but they never recovered their political independence, and their city fell an easy prey to each passing conqueror. It was even seized by the Parthians at a time when, already subject to Rome, it was ruled by a vassal of the empire.

Full of confidence in the prophecies which foretold the advent of a Saviour, heir to the throne of David, the Jews dared nevertheless to rise against Rome. Taking refuge in Jerusalem, at that time protected by a triple line of ramparts, they defended themselves with desperate valour. But famine, pestilence, incendiary fires, and fratricidal strife were the allies of the Roman captain, Titus. Tower after tower crumbled under the blows of his battering-rams; quarter after quarter was stormed by his veteran legions; the iron circle was drawn still closer round the doomed city of Zion. Deserters to the Roman camp were crucified before its

JERUSALEM—OMAR'S MOSQUE.

walls, captives butchered or thrown to the flames, the bravest grew pale at horrors unspeakable daily perpetrated within and beyond the ramparts, and when the last stronghold fell, of half a million souls, scarcely a few thousand deluded wretches had survived "to make a Roman holiday."

After another destructive siege rebuilt by Hadrian, but henceforth interdicted to the children of Israel, Jerusalem was still reserved for fresh woes, of which the most terrible was that inflicted on it by the ruthless Crusaders in the year of grace 1099. At that time it was an Arab and Mussulman city. But as soon as they had hewn a bloody way to the Holy Sepulchre, the champions of Christendom, scarcely giving themselves breathing-time to utter a prayer of thanksgiving, began a wholesale massacre, in which sixty thousand Mohammedans were butchered. After the days of the Crusades, the capital of Palestine dwindled to the proportions of a small town; but although still captured and recaptured more than once, it has ceased to be the sport of rival nationalities and religions. The religious wranglings are doubtless still carried on round about the "holy places," but only in the form of diplomatic intrigues. Yet even recently the conflicting interests of Greek and Latin converts supplied a pretext for the Crimean war.

El-Kods (Kuds), that is, the "Holy City," as it is called by the Arabs, lies nearly 2,650 feet above sea level, on a plateau which slopes gently southwards, and which is enclosed on three sides by deep ravines. On the east side runs the Wed-en-Nar, or "Valley of Fire," occasionally flushed by the waters of Kedron, a tributary of the Dead Sea. The Caves of Siloam are grouped in this valley, which is identical with that of Josaphat, between Jerusalem and Mount Olivet. West and south flows the torrent of Hinnom or Gehenna, so called from the chasm, a symbol of the lower regions, in which its waters disappear. Beyond this ravine the plateau is enclosed by other ridges preventing a distant view of the city. Previous to the recent spread of the suburbs along the converging routes, the first appearance of El-Kods was very striking. At the turn of a hill it burst suddenly on the view amid its pale green olive-groves and the irregular polygon of its walls, flanked with towers and a multitude of cupolas. Jerusalem is pre-eminently the city of cupolas, which constitute its real beauty. In Upper Judæa timber is so scarce that a style of architecture naturally prevailed in which stone became the chief element. Above the irregular buildings and winding streets of the city the majestic dome of the so-called Mosque of Omar rises in the centre of the Haram-esh-Sherif, or "Sacred Enclosure," supported at the north-east angle by the lofty Antonia tower.

Here formerly stood the temple of Solomon, to which worshippers "went up" from all the tribes of Israel. To this first sanctuary succeeded those of Nehemiah and Herod, which in their turn were followed by a temple of Jupiter, a church dedicated to the Virgin, and lastly the famous "Cupola of the Rock" (Kubbet-es-Sakhra), erected at the end of the seventh century. This monument, remarkable for its extreme simplicity, is nevertheless one of the most graceful and harmonious in Asiatic Turkey. It forms a vast hexagon pierced by seven pointed windows in each of its façades, which are themselves embellished with marbles and enamelled

porcelain tiles. In the centre of the building is inscribed a circular nave with two concentric colonnades, above which rises the light structure of the dome, resting on a wall decorated externally with verses from the Koran in bright letters on an

Fig. 191.—Remains of the Antonia Fortress, Jerusalem.

enamelled azure ground. In the interior the fine proportions of the edifice are interrupted only, towards the centre, where the regular pavement is suddenly broken by a projecting rock, the famous Sakhra, which has been identified with the summit of Mount Moriah. On this spot the sacrificing priests immolated the

victims, whose blood flowed through underground passages down to the torrent of Kedron. From Sakhra, supposed to be the foundation of the universe and source of the four rivers of Paradise, Mohammed took his heavenward flight.

Some other mosques and diverse monuments resting on old foundations are comprised within the space, some thirty-five acres in extent, which is surrounded by the quadrilateral wall of the sacred enclosure. Recent excavations have brought to light a great part of the substructures, notably the underground galleries, where hundreds of Jews took refuge after the capture of the Temple by the Romans under Titus. These vaulted galleries formed part of the gigantic works undertaken to transform to a level platform the summit crowned by the Temple. In some places the original foundations were discovered at 100, and even 125 feet, below the present surface. Before the Crimean war the Christians, who are now freely exploring the old sites in every direction, were rigorously excluded from the sacred enclosure. Even still the entrance to this district is interdicted to the Jews, who gather every Friday at the place of "wailing" beyond the western wall to recite the lamentations of Jeremiah, and at least touch the outer walls which bar their access to the "Holy of Holies." For centuries after the rebuilding of Jerusalem by Hadrian the city was closed to them, and during the Christian rule before the Mohammedan conquest under Omar, they were fain to purchase at a heavy price the permission to assemble once a year and weep over their desecrated temple. During the last century the number of Jews resident in the city was limited to three hundred.

The religious monuments of the Christians are grouped in the north-west part of Jerusalem, between the gates of Bethlehem and Damascus, where formerly stood a temple of Venus. Here a multiplicity of buildings of every age and style mark nearly all the venerated places which diverse traditions, some recent, some dating from the Crusades or from the time of Constantine, indicate as the scenes of the chief events in the Passion. Churches, chapels, crypts, originally distinct buildings, form a labyrinth of naves and galleries belonging to various Christian sects. With the exception of the Protestants, all the great religious confessions represented in Palestine have their allotted share in the land on which the eventful drama was enacted. The chief nave, where a pillar standing within a white marble ring marks the "centre of the world," belongs to the Orthodox Greeks. The Franciscans have a church all to themselves, but the Hall of Calvary is divided into two chapels, one of which is assigned to the Latins, the other to the Greeks. The crypt of St. Helena is claimed by the Christians of Abyssinia, but not exclusively, for the Armenians have the right of access, while one of the side chapels is set apart for the Latins. Copts and Jacobite Syrians assemble for worship in a particular recess, and the so-called Stone of Holy Unction remains the common property of all the faithful, Latins and Greeks, Armenians and Copts alike. Lastly, in their quality as suzerains and arbiters, the Turks themselves retain a station for general superintendence at the main entrance.

The "Rotunda," in the centre of which stands the Holy Sepulchre, is a modern structure, erected at the joint expense of Turkey, as sovereign power, of France

and Russia as representing the two rival orthodoxies of the Christian world. The little shrine built over the grave is the work of the Greeks, who on Easter eve assemble round the tomb to await the coming of the "sacred fire," which an "angel" hands to the bishop through a chink in the wall. On the appearance of this flame the faithful hasten to light their wax tapers at the bishop's candle; hymns and prayers resound on all sides, unfortunately mingled at times with the

Fig. 192.—Jerusalem.

Scale 1 : 25,000.

1,100 Yards.

shrieks and groans of the wounded and dying, crushed or trampled underfoot in the rush. In the year 1834 over four hundred bodies remained heaped up on the pavement of the Rotunda, and similar catastrophes have since been prevented only by the intervention of the Mussulman guard, under the command of a colonel wielding the *kurbash*.* An old custom requires the faithful to pass the flame rapidly over their faces, under the belief that it will scorch none but the wicked.

* Conder, "Tent-work in Palestine."

Formerly they brought linen cloths, the creases of which they caused to be singed by the sacred flame. These were then set apart to serve as shrouds at their burial.

Not far from the Holy Sepulchre stand the gateway and pointed arches of the Hospital of St. John of Jerusalem, formerly the headquarters of the knights of the "seven nations"—Provence, Auvergne, France, Italy, Aragon, England, Germany. Since 1869 the last alone is represented in the palace of the Order. Like France and Russia, Germany has also claimed an allotment in the vicinity of the holy places, where a church and schools have been erected, and the imperial banner hoisted. The Russians have installed themselves beyond the walls near the Gate of Damascus, on the highest part of the plateau, which commands the city, and against which the attacks of assailants were at all times chiefly directed. Here they have built their religious quarter, the structures of which are at once monasteries and barracks.

In every part of the city and environs are seen religious foundations and schools belonging to Greeks, Latins, and sects of every Protestant denomination. The subsidies sent from Europe and the New World in support of these establishments have sufficed almost to rebuild the city and double its area. As in the time of the Jewish domination, Jerusalem is thus still a city of priests and ministers, who under other names live at the expense of distant communities. Its only industry is the manufacture of soap, and its trade is of a purely local character. The Jews, who since the middle of the present century have become the most numerous element, are for the most part the so-called Ashkinazim, immigrants from Eastern Europe supported by the *haluka*, that is, the contributions forwarded to Jerusalem by the Israelites scattered over the whole world. But they still retain the old passion for the huckstering trade, daily purchasing wares of all kinds from passing caravans and hawking them through the streets of the city.*

From Mount Olivet, on a crest of which stands the Mosque of the Ascension, a view is commanded of a great part of Palestine, in one direction as far as the heights of Samaria and plateaux of Gilead, in another sweeping over the profound chasm of the Dead Sea, away to the summits of Moab and Idumæa. Westwards the Mediterranean is hidden by the eminences in the near distance; but at the foot of Olivet stretches the Valley of Josaphat with its countless tombstones, the first, according to the Jewish legend, which are to deliver up their dead at the sound of the trumpet on the last day.

In the neighbouring district the most remarkable ancient monuments are the sepulchral crypts, especially the so-called tombs of the "Judges," and those of the "Kings," where were found some remarkable sarcophagi now in the Louvre. Everywhere are seen religious structures, each with its local legend, and all visited by Greek and Latin pilgrims. In the environs the most interesting convent is that of Mar-Saba, or "Saint Saba," an ancient retreat of the Essenes, perched on a limestone crag overhanging the torrent of Kedron. Near the walls of the convent a solitary palm indicates a small garden-plot; but elsewhere the bare white rock

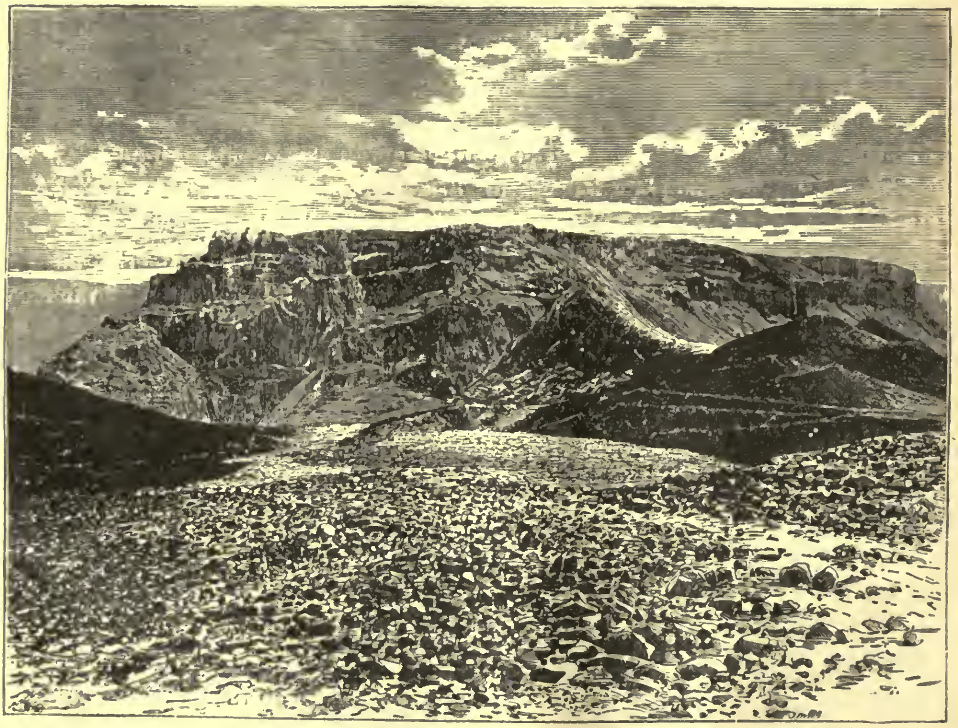
* Approximate population of Jerusalem in 1881: Jews, 15,000; Mussulmans, 7,000; Christians of all denominations, 8,000. Total, 30,000.

and gloomy crevasse are unrelieved by a single tree or tuft of herbage. Rebuilt at the expense of Russia, this monastery of Mar-Saba has become one of the wealthiest in Palestine. Yet it is none the less a place of exile for monks guilty of misdemeanour or suspected of heresy.

Bethlehem.—Jaffa.—Gaza.

Bethlehem, the "House of Bread," lies 5 miles south of Jerusalem in the midst of hills covered with vineyards or olive-groves. Its population consists mostly of Latins, who support themselves by the sale of sacred objects, such as medals,

Fig. 193.—Rock of Masada.



rosaries, chaplets, crosses of all kinds, and the very dust of the holy places. Like the church of the Holy Sepulchre in Jerusalem, the group of churches and convents in Bethlehem forms an irregular collection of structures without any architectural symmetry, belonging to diverse religious communities. To one gallery or flight of steps Greeks alone are admitted; others are open only to Latins, others again to Armenians. The chief nave, forming the basilica of the Nativity, a fine edifice dating from the first half of the fourth century, is the common property of the Greeks and Armenians, the Catholics being allowed access only to the choir. Beneath the church is a grotto paved in marble and ramifying in various directions,

where the faithful gather to worship at the fissure in the rock indicated by tradition as the birthplace of the Redeemer.

South of Judæa, and on the same tableland as Jerusalem and Bethlehem, the last considerable town in the direction of the wilderness is *Hebron*, the city of *El-Khalil*, or the "Friend of God," so named, like Orfa, in memory of Abraham. According to a local legend accepted by many mediæval Christians, but vehemently contested by the Damascene Arabs, it was near Abraham's grave in the neighbourhood of Hebron, and not in the territory of Damascus, that the red earth was taken to fashion the first man. Formerly pilgrims flocked in large numbers to Hebron, in order to contemplate this cradle of the human race and collect a handful of the mould from which they supposed themselves sprung. Here the "holy place" is the mosque of Abraham, which lies east of the El-Khalil torrent, high above the semicircular group of houses forming the chief quarter of the town. This mosque, which is partly hewn out of the rock, was previously a church, and at a somewhat earlier date a synagogue. Various buildings have succeeded each other within the outer enclosures, but these enclosures, built of huge blocks, appear themselves to be of great age, some archæologists assigning them an existence of three thousand years.

Beneath the mosque is a double cavern, which, according to a venerable tradition, was the cave of Macpelah, where Abraham, Sarah, Isaac, Rebecca, Jacob, and Leah were "gathered to their fathers." Till recently the mosque was opened only to the Mohammedans, who, however, themselves never visit the grottoes. Probably since the time of the Crusades they have remained undisturbed, except perhaps in the year 1834, when the people of Hebron, besieged by Ibrahim Pasha, hid their most precious objects under the mosque.

The El-Khalil torrent flows south-west in the direction of *Beer-Sabah*, the last village in Palestine on the verge of the desert, beyond which it loses itself in a wady draining to the Mediterranean. Immediately to the east of Hebron, which lies on the line of water-parting at a higher elevation than Jerusalem, other river gorges run in the direction of the Dead Sea. In this direction the frontiers of Palestine were formerly guarded against marauders by the fortress of *Masada*, which Herod had converted into an impregnable stronghold, apparently in order to serve as a place of refuge in case of danger. This rock, now known by the name of Sebbeh, is a limestone table of oval shape, almost inaccessible everywhere except on the west side, where it is connected by a narrow ridge with the inner plateau. After the fall of Jerusalem about a thousand Jews, under the leadership of Eleazer, threw themselves into this fastness, whence they defied the power of the Romans, who laid regular siege to the place. They encircled the base of the rock with a ditch, which still exists, raised a broad platform over against the western ridge as a site for their camp, and threw a pontoon across the ravine separating them from the citadel. The first lines were soon carried, but after the last assault was delivered, not a single defender showed himself behind the walls. Preferring the voluntary death of freemen to a shameful death at the hands of the enemy, all had immolated themselves. When the Romans penetrated into the fortress they found only two

women and five children alive. Such was the last episode of Jewish independence.

Jerusalem is connected with the coast by a carriage route about 36 miles long, along which a telegraph line has now been laid. The road itself is intended ere long to be replaced by a railway which, although long traced on the maps, has not yet been begun. The work will in any case be costly, owing to the rugged nature of the ground and the steep inclines, which will average from 65 to 75 feet

Fig. 194.—MASADA.
Scale 1 : 90,000.

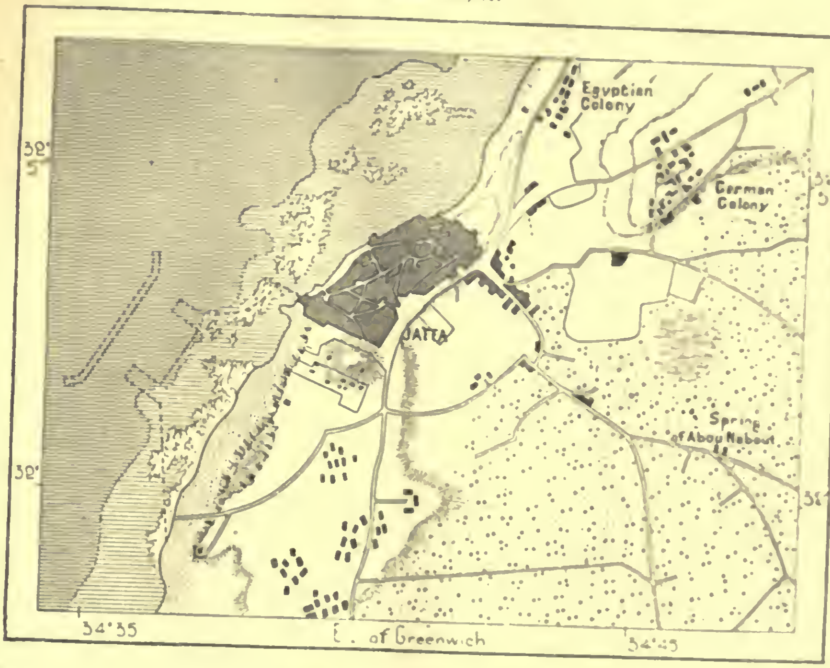
per mile. At the western foot of the hills, on the coast plain near the ancient *Madin*, birthplace of the Machabees, the two towns of *Ludd* and *Ramleh* are surrounded by fertile tracts. But as indicated by the name of Ramleh, here begin the sands, which reach to the vicinity of Jaffa, broken only by a few small oases in the neighbourhood of the villages or of reservoirs fed by the wadies.

Jaffa, or *Yafa*, that is, "The Hill," lies on an eminence in an oasis some 4 square miles in extent and fringed north and south by ranges of shifting dunes.

JAFFA—GENERAL VIEW.

Its gardens receive a sufficient supply of water through the canals derived from intermittent streams and wells which act as reservoirs for the rains. Here the almond, apricot, peach, mulberry, and other southern plants yield excellent fruits. The banana and sugar-cane are also cultivated; but most of the garden-plots, bordered with gigantic nopals, are planted with oranges and citrons, whose produce is exported even to the west of Europe. Since the middle of the present century the gardens of Jaffa have increased fourfold in extent, and in 1880 contained seven

Fig. 195.—Jaffa.
Scale 1 : 22,000.



Orange Groves.
0 to 16 Feet. 16 Feet and upwards
1,100 Yards.

hundred and sixty-five thousand orange trees, which yielded a crop of thirty million oranges.

Although it has been the outport of Jerusalem and of all South Judæa from the very dawn of history, Jaffa, the ancient Joppé, affords but indifferent shelter to shipping. The old basin, choked by the sands brought by the marine currents, and probably upheaved by underground agencies, now lies high and dry amid the gardens stretching north of the hill on which the town is built. The coast extends in an almost unbroken straight line north and south, constantly exposed to a heavy surf much infested by sharks. Here, according to the legend mentioned by Pliny and Josephus, stood the rock to which Andromeda was chained. Facing the town is a chain of reefs about 1,000 feet long, which forms a sort of breakwater, affording some shelter to a little haven accessible to craft drawing from 8 to 10 feet. But

larger vessels and the steamers plying along this seaboard anchor half a mile off, always ready to set sail whenever the winds freshen and threaten to drive them ashore.

In these waters the sea is nearly always rough, and when the dangerous north-west gales prevail, the steamers are unable to call at Jaffa, but continue their route north or south, landing their merchandise at Khaifa or Port-Said. Nevertheless the local trade with Jerusalem, already about one hundred and fifty thousand tons annually, and the passenger traffic, exceeding eighty thousand persons, are steadily increasing from year to year. Hence the creation of an artificial harbour in deep water seems to be urgently called for. According to one project, such a harbour, with a northern and a southern entrance protected by a breakwater 1,200 feet long, might be constructed beyond the chain of reefs, affording for shipping a clear space of over eight acres, with a depth of not less than 26 feet. The extensive tracts which might easily be reclaimed from the rocks and sea would at the same time afford room for a further extension of the town, at present confined within far too narrow enclosures.

The trade of Jaffa, which is exclusively in the hands of the native Christians and foreigners, consists chiefly in cereals, oranges, citrons, and other produce of the soil. The export of these articles might easily be doubled by constructing an aqueduct to deflect southwards the copious Nahr-el-Aujeh stream, which at present flows nearly 4 miles north of the town, and from which sufficient water might be obtained to irrigate the intervening arid plain.* Thus might be again brought under cultivation the whole coast of Sharon, famous in Biblical records for its "roses," which, however, are supposed to have been the narcissus, at one time growing in profusion amid these gray sands.† The Wurtemberg colony of *Sarona* settled in this district, and numbering about two hundred and fifty persons, has already created a smiling oasis in the desert. The Israelitish Alliance also possesses in the neighbourhood of Jaffa an agricultural institute, where hundreds of Jewish youths learn the art of gardening. Some large olive-trees planted in symmetrical rows near the town belonged formerly to a sort of model farm established here by Colbert.

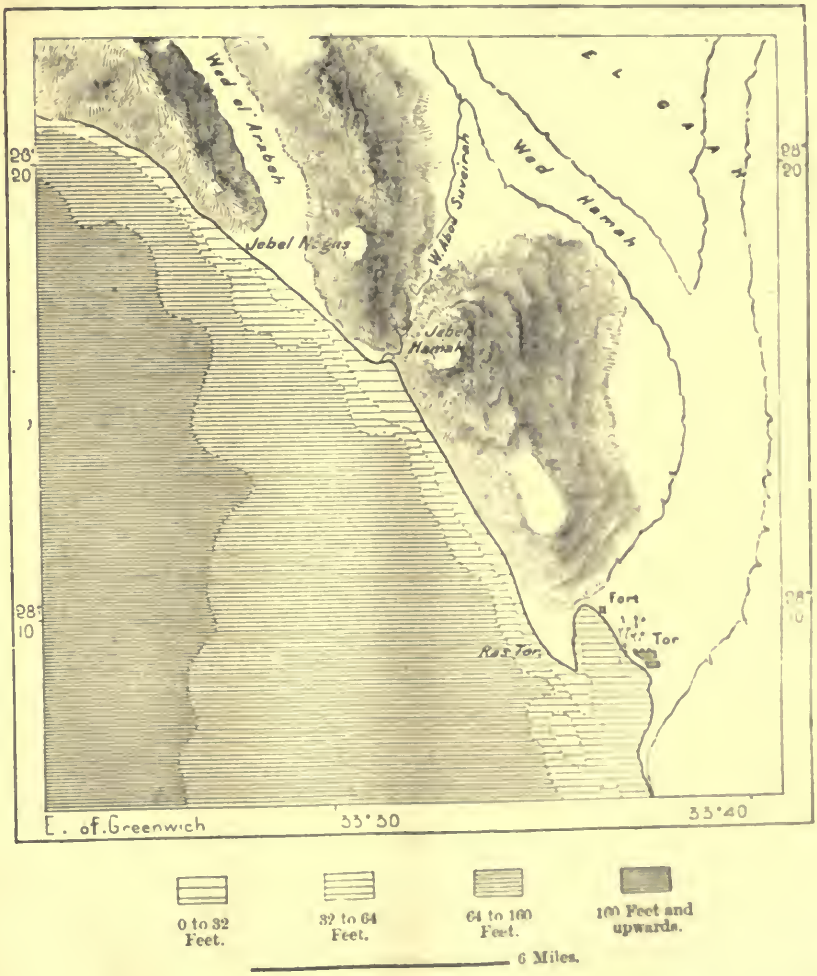
South of Jaffa most of the old Philistine strongholds have been replaced by wretched hamlets. *Askalon*, the "Betrothed of Syria," which notwithstanding incessant wars and sieges continued to remain a large place down to the time of the Crusades, is now completely abandoned. Of its buildings nothing is to be seen except shapeless ruins and its semicircular ramparts, which terminate north and south at the steep escarpments of a cliff wasted by the Mediterranean waters. The space thus enclosed is entirely occupied by gardens, where the inhabitants of the neighbouring village of *Jurah* still cultivate the species of garlic to which the ancient city was indebted for its name of *Ascalonium*, or eschalot.

South of the Philistine territory the venerable city of *Gaza* (Ghazzeh), already almost on the verge of the desert, is the southernmost town of Palestine in this direction. Mentioned in the Egyptian records nearly four thousand years ago,

* Trade of Jaffa in 1878: exports, £6,000,000; imports, £3,000,000. Total, £9,000,000.
† Conder, "Palestine Exploration Fund," January, 1878.

Gaza still remains a considerable place, thanks to its position on the high road between Palestine and Egypt, that is, between Asia and Africa. During the early period of the Byzantine empire it was noted for its schools, to which the Arabs flocked from great distances in order to study the Hellenic culture and philosophy. At present it is not so much a city as an aggregate of villages and gardens disposed in an irregular circle round a large mound flat on the top, which seems to be partly

Fig. 196.—Tor.
Scale 1 : 800,000.



composed of débris. Here stand the governor's residence and the chief mosque, originally a church dating from the twelfth century.

The site of Gaza has frequently been displaced, moving eastwards before the shifting dunes of the desert. In this district the struggle is incessant between the peasant and the encroaching sands, which surge up round the fruit-trees, and which, forming hillocks from 40 to 50 feet high, often swallow up houses, gardens, and orchards together. Under the sands in many places west of the city

the remains have been found of old buildings, potsherds, and other refuse, and even Roman statues of fine workmanship. The ancient "Marina" has also been almost completely obliterated by the same cause. Few vessels care to venture near this surf-beaten coast, which shoals very gradually. Hence the trade of the district is conducted entirely by the overland route with Egypt, between the frontier of which and Jerusalem Gaza lies about midway. In the peninsular of Sinai there are absolutely no towns. *Suez*, the port of the western gulf of the Red Sea, lies on the African or Egyptian side of the maritime canal. *Nakhl*, in the desert of Tih, is nothing more than a military outpost and rendezvous for caravans. In the Sinai wilderness the *Pharan* of the "Dates" has been replaced by a Bedouin camping-ground, while another *Pharan*, at the mouth of the Wadi-Pheiran, has disappeared altogether. The outport of the peninsular on the Gulf of Suez is *Tor*, which lies half hidden from the view by a cluster of palms behind a neighbouring headland. This place has been chosen by the international sanitary commission as a quarantine station for the vessels bringing pilgrims back from Jeddah. *Akabah*, at the head of the eastern gulf, to which it gives its name, consists of a fortress commanding the tents of a few Arab fishers interspersed amid clumps of dune palms. Near this spot formerly stood the commercial city of *Elath*, which survived till the time of the Crusades, and which for a period of fifty years was held by the Christian kings of Jerusalem. Some three thousand years ago the seaport of Elath was *Ezion-Ghebir*, the emporium where the Phœnicians shipped for Solomon the gold, the costly fabrics and produce of India. Later on, when the sumptuous city of Petra was being hewn out of the rocks in the Idumæan Mountains, and when the numerous towns of Decapolis were flourishing in the land of Moab and Ammon, the Gulf of Akabah was also constantly visited by commercial fleets. At that time the rocky islet of *Guriah*, lying near the extremity of the gulf, was a military station of considerable importance. Should the valley of the Jordan be repeopled, and its highways extended southwards along the Arabah depression, these waters cannot fail to become once more animated by the presence of trading vessels.

Administrative Divisions of Asiatic Turkey.

Like those of European Turkey, the vast Asiatic possessions of the Sultan are divided into *vilayets* or provinces, which are again subdivided into *sanjaks* or "banners." Besides these general administrative departments, there are certain so-called *mutaserifiks*, which possess a special importance either from the strategic standpoint or in consequence of the diplomatic intervention of the European powers. The limits of the various provinces and circles in Asiatic Turkey have undergone frequent changes, according to the vicissitudes of foreign wars and internal revolutions. The governments of the pashas have also occasionally been enlarged or diminished as the result of court intrigues and the favour enjoyed by them with the Sultan. In any case these administrative divisions are far from corresponding with their natural outlines. The islands of the archipelagoes adjacent to the Asiatic seaboard form a part of the same vilayet as those lying nearer to the

European coast. So also the vilayet of Bagdad comprises on the west side of the Persian Gulf an extensive strip of the peninsular of Arabia. Lastly, the whole of the Sinai peninsular, assigned politically to Egypt, although forming a physical continuation of the Syrian coastlands, is limited on the east side by a purely conventional line drawn geometrically across wadies, plains, and mountain ranges.

In the appendix will be found a table of the administrative divisions of Asiatic Turkey, with their approximate population and chief towns.

CHAPTER X.

Arabia.

THE vast peninsular of Arabia, nearly one-third as large as the European continent, occupies the very centre of the Old World. Attached, so to say, to the mainland by the mountain ranges connecting Sinai with Taurus, it may be said to form a land of transition between Asia and Africa. In its outlines, the disposition of its highlands, and its climatic conditions, it is mainly an African region; by the tilt of the land, draining to the Euphrates, and by its contiguity of over six hundred miles to that basin, it forms a geographical division of Asia.

But while thus in some respects connected with both continents, Arabia really constitutes a world apart. It is traversed by none of the great historic highways, which on the contrary everywhere avoid it. The chief route between Asia and Africa, which has in all ages been followed by the ebb and flow of military and commercial movements, follows the Syrian seaboard, passing thence to the north of the Sinai Peninsular. Skirted on one side by this international highway, and surrounded on the three other sides by the Indian Ocean and its two great inlets, the Red Sea and Persian Gulf, the peninsular has not inaptly been called Jezireh-el-Arab, or "Island of the Arabs." In spite of the intervening waters, most real islands depend far more than does Arabia on the adjacent continents.

Historic Retrospect.

Being thus almost secluded from the rest of the world, little of the peninsular was known to the ancients beyond the border lands and coast districts. The conquerors mentioned in history never penetrated far into the interior. The only military expedition undertaken by Rome, which was conducted by Ælius Gallus in the year 22 of the old era, was mainly confined to the more thickly inhabited region which Ptolemy designates by the name of Arabia Felix. This geographer himself was acquainted only through the reports of caravans with the routes and commercial stations lying at a distance from the seaboard. Since the Hejira, and down to the middle of the last century, all the information received in Europe regarding

Central Arabia was due to the pilgrims to the holy cities of Mecca and Medina. Although their sovereign bears the title of "Head of the Faithful," the Turks have never occupied more than narrow strips of the Arabian seaboard, on the west along the Red Sea, on the east on the coast of the Persian Gulf. The Egyptian armies, however, commanded by a vassal of the Turkish empire, succeeded during the years 1810-1820 in advancing victoriously into the Wahabite territory in the heart of the peninsular. But none of the southern regions were visited by them. Thus no other country has been less permanently affected by military expeditions than Arabia. Throughout the whole course of history, hundreds of native tribes have kept entirely aloof from foreign contact.

But although well protected from invasions by the waterless deserts surrounding them, the Arabs are not altogether secluded from the rest of the world. Accustomed to traverse the sandy wastes, familiar with the routes and wells of the desert, they find it far easier to quit their domain than do strangers to enter it. Ancient history speaks of the triumphant incursions of the Hyksos into the Nile delta. And with what irresistible fury the Arab descendants of those warlike shepherds again burst upon the surrounding peoples in their twofold capacity of propagandists and conquerors! The pent-up energy of these obscure tribes, accumulated from age to age, was suddenly revealed to the world with an intensity superior even to that of the Greeks when they overran Asia under Alexander. It was an explosion that has been quaintly compared to that of the rarely flowering aloe, which vegetates silently for many generations, and then suddenly bursts into a glorious bloom, dazzling the sight with its brilliant effulgence. Egypt, Syria, Babylonia, Persia, Asia Minor, North Africa, Sicily, Spain, many regions washed by the Indian Ocean, became, so to say, Arab lands, where the old cultures were either swept away or stimulated into new life.

Neither their intense religious fervour, nor the strength acquired from self-abnegation, suffices to explain the amazing success of the Arabs, which was also largely due to the favourable disposition of the peoples themselves. In many countries they appeared, not as oppressors but as liberators. More just than the old rulers, even more tolerant in spite of their fiery zeal, they attracted millions to their cause. In less than a century the number of those who claimed kinship with the Arabs, from the banks of the Guadalquivir to the Sunda Islands, had probably increased tenfold. Heirs of the arts and sciences bequeathed to them by the enervated Byzantines, the Arabs saved them from the risk of perishing, and caused them again to flourish. They fanned into a fresh flame the embers which were slowly dying out under the fatal influences of Oriental monasticism. Thus notwithstanding their geographical isolation, the Arabs have played a considerable part in the collective work of humanity. Yet the great service rendered by these "Semites" to Europe itself, by abridging the long night of the dark ages, has been too often overlooked by certain "Aryan" writers, ever reluctant to recognise any merits in "alien" races.

Progress of Geographical Discovery.

During the epoch when the Arabs were the dominant nation in Western Asia and the Mediterranean basin, their geographers took more interest in the new lands conquered by the sword of Islam than in the regions of the peninsular whence the disciples of the Prophet had gone forth to overrun the world. Nevertheless they at least described the routes followed by the pilgrims to the holy cities of Mecca and

Fig. 197.—Itineraries of the Chief Explorers of Arabia.

Scale 1 : 3,000,000.

Route of the Egyptian Troops. 1822-1827. 1833-1837. Route of the Pilgrims.

600 Miles.

Medina; and even on the east of Arabia they added some valuable details to the information left us by Ptolemy and the other writers of antiquity.

But the geographical exploration of the country by Europeans was only begun in the year 1762 with the journey of Carsten Niebuhr to Yemen. The holy places of the neighbouring districts were afterwards visited by Seetzen, Burckhardt, Ali-Bey, Chedufau, Tamisier, Ferret and Galinier, some of whom penetrated into the interior of the peninsular. In 1819 it was traversed by Sadlier in its entire breadth from the Persian Gulf to the Red Sea. Later on Fulgence Tresnel and Arnaud explored more particularly the west coast and the southern districts, while Wrede penetrated into parts of the Hadramaut wilderness where no subsequent traveller has followed in his footsteps. Wellsted studied the interior of Oman, and Wallin,

like Sadlier, crossed the peninsular from coast to coast, passing through the Jebel-Shammar country in the very heart of the central plateau.

In more recent times Palgrave took a diagonal course from the north-west to the south-east, passing in the year 1862 from the Mediterranean to the Persian Gulf across the interior of Nejed. Two years later on, Guarmani passed from Jerusalem to Kasim, and Doughty wandered for some time over the same northern deserts. Still more recently Captain and Lady Blunt traversed the northern regions from Damascus to Bagdad through Jebel-Shammar, and they were soon after followed by Huber, who also made some important discoveries in the northern and western districts, penetrating in one direction as far as Kasim. Thus the various tracks of explorers cross and overlap each other throughout the whole of North Arabia, while the south-eastern regions still remain almost unvisited. The best known provinces are those which lie within reach of the seaports, especially the territory of Arabia Felix in the proximity of Aden, Moka, and Hodeidah. This country has been traversed from west to east by M. Halevy, who has brought back copies of hundreds of Himyarite inscriptions sculptured on the surrounding rocks and monuments.

General Survey of the Peninsular.

Externally Arabia nearly everywhere presents uniform massive outlines of almost geometrical regularity. By the side of the monotonous African continent, the peninsular seems even still more monotonous. The west coast, from the Gulf of Akabah to the Strait of Bab-el-Mandeb, forms nearly a straight line, while that of the south-east, facing Somali-land and the Indian Ocean, is scarcely more diversified, being broken at intervals only by a few elongated curves, and presenting in its entire development a slight convexity towards the sea. Beyond the abrupt headland of Ras-el-Hadd, the coast trends north-westwards, as if about to take a course parallel with the axis of the Red Sea, and thus transform the whole peninsular into a vast quadrilateral. But at Cape Masandam the coast line is suddenly interrupted, a barrier of islands and islets here limiting the Gulf of Oman, and apparently forming the true continental seaboard.

The Persian Gulf, properly so-called, is nothing more than a shallow basin with its inlets and promontories interrupting the uniform outlines of the peninsular. In former geological epochs before the creation of the alluvial Mesopotamian plains, the almost closed sea, which receives the waters of the Tigris and Euphrates, formed a parting line at least double its present extent between Arabia and Irania. At that time its waters washed the eastern foot of the Syrian hills, and in the direction of Asia Minor, as well as towards Egypt, the Arabian peninsular was attached only by a narrow isthmus to the mainland.

Viewed as a whole, Arabia presents in the interior a relief scarcely less regular than its outlines. The coast of the Red Sea is skirted by a border chain and some parallel ridges forming a southern continuation of the Moabite and Idumæan highlands, and constituting the main water-parting of the land sloping broadly

westwards in the direction of the Euphrates and Persian Gulf. The south coast is also fringed by a border range, whose spurs project here and there beyond the normal line of the seaboard. Farther east the coast is also skirted by hills from the Ras-el-Hadd to Cape Masandam. Towards the sea the whole peninsular is thus, as it were, enclosed by a regular rampart, which at several points exceeds 6,500 feet in height.

The centre of this vast enclosure is occupied by a hilly region, which is connected by several ridges with the western coast range. This is the so-called Nejed, or "Upland" region, north of which the land falls towards the plains of the Euphrates. On the opposite side it is separated from the southern highlands by somewhat less elevated tracts, almost absolute desert wastes throughout their whole extent.

The Tehama, or "Hot Lands," as the narrow strips are called which stretch between the border ranges and the sea, form a distinct torrid zone answering to the Ghermsir of Persia and the Mexican Tierra Caliente. But this term, Tehama, is applied in a more restricted sense, especially to the coastlands between the Red Sea and the Madian and Yemen highlands.

An approximate estimate only can be formed of the superficial extent of the peninsular, based mainly on the surveys of the seaboard so far as they have been completed. But even here several points remain still unexplored. Towards the north Arabia has no natural limits at all beyond the zone of cultivated lands following the course of the Euphrates. Here the steppes, occupied or infested by the nomad Bedouins, stretch right up to the region traversed by the great historical highway between Antiochia and Babylon. In this direction it is impossible even to lay down any rigid political frontier line; for the nomads shift their camping-grounds in the Hamad or Badiet-el-Arab according to the abundance or scarcity of water, the richness or exhaustion of the pastures, the feuds or friendships of neighbouring tribes. The Sinai peninsular and land of Madian are also usually regarded as forming part of Arabia, but these regions are now included politically in Egypt, of which they form integral sections in official reports and statistical returns.

It is thus obvious that the geographical expression, Arabia, is differently interpreted by different authors. Hence also the discrepancies, amounting to many thousand square miles, presented by the various published estimates of its total area. Deducting the territories now subject to Turkey, Behm and Wagner give it a superficies of rather more than a million square miles. But the whole region bounded by the Gulf of Akabah, the Idumæan highlands, the Trans-Jordan uplands, and the Euphrates Valley has an absolute area estimated by Engelhardt at not less than 1,240,000, and, including the Sinai peninsular, 1,262,620 square miles.

Over this vast space the population is very thinly scattered. As far as can be judged from the various summary calculations of travellers, it cannot be estimated at more than six millions for the whole of the peninsular, which would thus appear to be forty times less densely peopled than France.

Mountain Systems.

The Idumæan highlands, culminating with Mount Hor, traditional grave of Aaron, are continued southwards, first along the east side of the Gulf of Akabah, and then along the coast of the Red Sea, but without forming a regular or unbroken mountain range. Detached masses, some little more than huge crags, others real chains, follow successively in the neighbourhood of the seaboard. Some of these are completely isolated by broad wadies many hundred yards wide, while others are connected by rocky ridges with the main range, which skirts the coast at distances varying from 30 to 60 miles. To this main range, which forms the eastern limit of the Egyptian possessions, the term Jebel-el-Shafah, or "Lip Mountain," has been applied.

But the natural limit of the whole land of Midian north of Hejaz is indicated by the depression traversed by the pilgrim route between Damascus and Mecca. This track, marked by a long line of wells, separates the Harra district, with its extensive lava streams, from the sandstones of Hismah forming the edge of the plateau, and from the granite and porphyry ranges fringing the Madian coast.

Another route, followed by the pilgrims from Egypt, passes along the western slope of the hills, at certain points approaching close to the sea, but elsewhere crossing the projecting headlands at some distance from the coast. East of the Gulf of Akabah it recedes over 30 miles from the shore in order to avoid the rugged peninsular which projects like a huge barrier at the entrance of the gulf, and which is continued seawards by numerous islets encircled with coral reefs. The large island of Tiran, belonging to this little archipelago, is recognised at a great distance by its triple crest.

The heights, which rise either in isolated masses or continuous ridges near the Madian coast, take the special name of Jebel-et-Tehamah, that is, the "Mountains of the Hot Lands." They are perfectly distinct from and higher than the parallel chain of the Jebel-el-Shafah, to which Burton has applied the Indian title of the "Ghats." Mount Arnub, which belongs to this system and which terminates eastwards in a vertical wall 1,000 feet high, appears, according to the English Admiralty chart, to have an elevation of 6,430 feet. Farther south Mounts Harb and Dibbagh both exceed 6,600 feet, while on the marine charts 9,000 feet are assigned to the huge granitic mass of Mount Shar, which is about 18 miles long, and everywhere surrounded by sandy wadies. The altitude, however, is reduced by Wellsted and Burton to 6,650 feet at the utmost.

This Tehama range is no less irregular in the geological formation and colour of its rocks than in the form and elevation of its peaks. Some of its crests, of volcanic origin, seem to be connected by eruptive crevasses with the volcanoes of the Harra district, lying on the opposite side of the border chain. Most of the summits are of granite or porphyry. But the whole series of secondary rocks is represented, including even the contemporary corals which are continually enlarging the coast, blocking up old seaports, and creating new ones. Veins of white quartz standing out in relief beyond the weathered escarpments streak the

hills either in parallel lines or geometrical patterns, their dazzling brightness presenting a striking contrast with the pink, yellow, blue, gray, or blackish tints of the surrounding rocks.

The Madian hills like those of Sinai and Afghanistan, have also their "musical sands." Not far from Mount Arnub, and at the foot of a spur of the Shar range, the old pilgrims' route is skirted by the so-called Goz-el-Hannan, or "Mounds of Wailing," which when approached by the "faithful" seem to emit a plaintive music like that of the wind playing on an Æolian harp. From time out of mind the Arabs have been accustomed to sacrifice lambs at the foot of these harmonious hills.

To the diversity of the Madian rocks corresponds that of their mineral deposits. This is one of the richest regions in the world in ores of all kinds, and the heaps of scoriæ met here and there show that its mines were extensively worked by the ancients. Here Burton and his fellow explorers discovered three hills containing large masses of pure sulphur. Several mountains are full of ferruginous ores, easily recognised at a distance by the colour of the rocks. The beds of nearly all the wadies are also strewn with layers of granulated metal deposited by the running waters. In north Madian most of the metalliferous lodes contain copper and silver, while in the south silver and gold prevail. Plans for resuming mining operations in this district have been prepared, and railways and landing-stations projected. Nothing is wanting except the formation of companies with working capital, which doubtless would be forthcoming were British protection extended to the land of Madian. The chief obstacle to these undertakings is the absence of water, which, as on the Peruvian coast, would certainly have to be obtained by machinery from the sea.

The Egyptian possessions are separated from the Turkish province of Hejaz by the Hams, a wady some miles broad, which rises on the Kheibar plateau, and which has been crossed near its source by the traveller Huber. Like Tehama and Nejed, this term Hejaz has no precise geographical signification, and has been applied both by native and European writers to regions differing greatly from each other. Literally it means the land of "separation," either because its mountains separate the coastlands from the plateaux of the interior, or because it is situated between Syria and Yemen, or possibly also because it is separated by its hills and mountain ranges into a multitude of distinct valleys.

The Hejaz and Assir Uplands.

At present the term Hejaz, coinciding with the political division, is applied to the whole of the western region comprised between Madian and Yemen north and south, and from the Red Sea inland to the somewhat vague limits in the interior, where the jurisdiction of the Great Sherif of Mecca ceases. In other respects the relief of the land is much the same in Hejaz as in the northern province of Madian. Here also we have the same detached masses rising above the low-lying coast zone of the Tehamah, and running parallel with the main water-parting, but interrupted by numerous depressions. None of the summits, however, attain an

elevation of 6,500 feet, the highest being the Rodwa peak, which, according to the British Admiralty charts, is only 6,000 feet high.

In Hejaz, as in Madian, the granitic formations as well as those of secondary origin are frequently interrupted by lava streams. As in so many other parts of the wilderness, here also is heard the "music of the sands." When passing by one of those singing dunes in the district south-east of the seaport of Yambo, the traveller Fulgence Fresnel was assured by the Bedouins that the mysterious sounds were the wailings of the unfaithful spirits confined in the hills till the Day of Judgment.

In some regions of the Hejaz the escarpments of the plateau fall so gently that the land can scarcely be described as mountainous. Thus the route from the coast at Yambo leads inland to Medina without crossing any ranges properly so called. Mecca is of still more easy access, but this place lies on the west slope of the main water-parting in the plain, which inclines towards the seaport of Jeddah. The true water-parting of the peninsular, known in this district by the name of Jebel-Kora, rises to the east of the holy city. It consists of a ridge of granite, porphyry, and other primitive rocks, whose seaward spurs are composed of sedimentary layers, ranging in height from 1,500 to 3,000 feet. According to the botanist Schimper, the main range of the Jebel-Kora is still over 5,300 feet at the pass crossed by the rugged track leading from Mecca to the fortified town of Taif, on the eastern slope of the water-parting. Farther north the chain falls gradually, but towards the south it again rises, and in the lofty Gurned or Beni-Sufyan peak, visible on the south-east horizon, it is said to attain an altitude of no less than 8,300 feet.* In these elevated highlands the traveller might almost fancy himself transported to the Alpine regions of Central Europe or the Balkan peninsular. In the deep gorges the rush of running waters is heard amid the granite boulders, the cliffs are carpeted with a green, flowery sward, the houses are overshadowed by leafy fruit-trees; surprise is caused by the apparation of dusty caravans traversing a charming landscape, which seems intended by nature as the secluded home of Arcadian shepherds and their flocks.

To the uplands of the southern section of Hejaz, whose seaboard is specially known by the name of Tehamah, the general designation of Assir is usually applied. Here also the crests are of granite interspersed with sandstones and limestones, and varied here and there with eruptive basalts. Viewed as a whole, these highlands form a southern continuation of the long coast range, but they appear to be even more elevated than those of north Hejaz. During the winter season they are frequently snow-clad, and even in the month of April Dr. Chedufau, who accompanied the Egyptian army of invasion, saw the streams on the higher grounds fringed with glittering icicles. Two passes alone were found practicable by the forces of Mehemet-Ali, all the other gaps in the hills being accessible only to the tribes on both slopes, accustomed to scale Alpine heights. The Assir territory, which is protected in its southern districts by the most rugged escarpments, is inhabited by the Assir tribes, who give their name to the whole region, and who

* Schimper and Burckhardt.

till lately maintained their independence. The upland valleys occupied by them form but a small section of the highland country designated on the maps by the name of Assir.

THE YEMEN HIGHLANDS.

Yemen may in a general way be described as the triangular region at the south-west extremity of Arabia which is bounded on the west by the Red Sea, on the south by the Gulf of Aden, and on the north-east by the hills sloping towards the wilderness. This extensive tract, which corresponds to the Arabia Felix of the ancients, is almost entirely occupied by a hilly plateau, above which rises distinct mountain ranges mainly disposed parallel with the Red Sea, and thus forming a prolongation of the Hejaz uplands. Here the granite, trachite, and other rocky summits attain considerable elevations, although their culminating point cannot yet be determined with any certainty. During his journey from Aden to Sana, Benzo Manzoni successively traversed several passes over 6,500 feet high, and above these the Nakil-Lessel towered 1,100 feet still higher towards the south of Sana, capital of Yemen. It thus appears that the main commercial route in this region runs at a higher elevation than that of Mount S. Bernard and the greater part of the carriage-roads over the Alps.

The Jewish explorer Shapira, who, like Halevy, visited his co-religionists in Yemen, assigns an altitude of no less than 11,100 feet to the Kau-Keban mountains, lying north of Sana. Numerous towns in this region stand at heights of over 6,500 feet above sea level, and Sana itself, the largest of them, is said to have an altitude of considerably over 7,000 feet, that is, more than that of any Alpine village in Central Europe.

Like those of Assir, the Yemen highlands penetrate into a climatic zone totally different from that of the plains, and many of their upland plateaux, shaded with large trees or clothed with bright verdure, recall the scenery of the Italian mountain ranges. In hundreds of valleys the slopes are laid out in cultivated terraces, forming vast amphitheatres of rich vegetation. In this mountainous region the very conditions of soil and climate render a nomad life almost impossible. Inhabited by settled communities, who lived on the products of agriculture, and traded in some of the most precious commodities in Asia, Arabia Felix was for that very reason necessarily exposed to the attacks of foreign potentates. Invasion was at the same time facilitated by the division of the land into a large number of petty states, often at feud with each other. Thus it happened that while the inhabitants of the lowland plains were able to preserve their independence for long ages, those occupying rugged mountain fastnesses became enslaved to foreign conquerors. Over one thousand nine hundred years ago the Roman legionaries of Augustus overran the whole country from the slopes of the Red Sea to Hadramaut on the declivity facing the Indian Ocean.

At present Yemen is merely a Turkish province held by strong garrisons. Since the year 1839 the English have also been in possession of Aden, its best

ADEN—STEAMER POINT.

seaport, thus securing the profits of the whole trade of south-west Arabia without the trouble and responsibility of conquest. Several petty sultans in the interior have doubtless preserved the title, rank, and outward show of independent princes; but having accepted pensions from the English, they are in reality mere vassals of the British Empire.

Although no longer possessing a single active volcano, the Arabian peninsular was formerly one of the great centres of igneous activity. Several crests, composed entirely of eruptive rocks, are found beyond the Yemen highlands in the low-lying Tehama both of the Red Sea and Gulf of Aden. For its boldest headlands and deepest inlets the mainland itself is indebted to igneous disturbances in the immediate vicinity of the seaboard. One of these volcanic headlands, thrown up from a crevasse on the coast, is the Jebel-Shamshan (1,140 feet), which shelters the town of Aden, and which is connected by a narrow strip with the continent. A like origin is assigned to the Jebel-Hassan, which projects farther west beyond the normal coastline, which is recognised at a distance by the "Ass's Ears," as its two peaks are called by seafarers in those waters. In the same way the "saddle-back" of the Jebel-Khan rises above a neighbouring promontory, beyond which appears the imposing mass of the Jebel-Kharaz (2,730 feet), which is separated from the sea by sandbanks. Of volcanic origin is also the peninsular rock which forms the south-west extremity of Arabia between the Red Sea and Indian Ocean, on the east side of the Strait of Bab-el-Mandeb. Lastly the island of Perim, whence the English command the entrance of the Red Sea, is a mere mass of reddish scoriæ disposed in semicircular form round a central crater.

Hadramaut and South Coast.

The southern section of the peninsular is of a monotonous character, both in its general aspect, and in the relief of the surface. The zone of coastlands is almost everywhere rather low and studded with volcanic hillocks, beyond which it rises in a series of terraces to a limestone range running at a mean distance of 90 miles from the coast, and at an approximate altitude of over 3,000 feet. Beyond this chain the land falls down to an extensive central plain known by the name of Jof. But even here the monotonous landscape is broken by a few lofty masses, such as the Yafia mountains, which form the southern termination of the Yemen orographic system, and which are continued eastwards parallel with the coast and with some lateral ridges. One of the summits of the Jebel-Fuddhli, 75 miles north-east of Aden, attains a height of 5,530 feet; and farther on the hills lying near the coast are probably exceeded in altitude by the Jebel-Kern and Jebel-Aulaki, which stand on a plateau at a mean elevation of about 3,000 feet. The Tsahura and Kaur-Saiban peak, north-west of Makalla, are stated by Von Wrede to have a height of even 8,000 feet.*

A deep valley traversed by the intermittent Wady Hajar or Mossileh takes its origin on the east slope of Yemen; whence it runs across the whole mountainous

* Reise in "Hadramaut."

region of the south, reaching the coast near the Ras-el-Kelb headland, over 240 miles from Aden. The hills skirting the east side of this depression belong to two distinct formations. Those in the west, characterised by round or conic summits, nearly everywhere easily ascended, consist of quartz, gneiss, and shales, in many places clothed with herbage and brushwood. The eastern heights, formed of limestones and sandstones disposed in regular layers, present a totally different aspect. Along the wadies which fall seawards at a uniform incline of about one in eighty yards, the hills are disposed like the tents of a military encampment, at heights ranging from 350 to 500 feet. This first line is succeeded by a second, four or five times higher, every *ambas* or crest of which has the appearance of a truncated cone. Everywhere these little terraced hills correspond with each other, evidently constituting all that now remains of a once continuous plateau cut into uniform fragments by the erosive action of torrential downpours. The work of disintegration proceeds from year to year; the sandstones become weathered under the influence of the elements until nothing remains except the harder framework, on which not a blade of grass can grow. One of these ranges consists of twenty-two hills so uniformly shaped and differing so little from each other, that Miles and Munziger christened them the "Twenty-two Brothers." In this region the only arable tracts are the alluvia deposited at the foot of the hills along the banks of the wadies. These longitudinal oases are interrupted at intervals by masses of gravel washed down from the side ravines. Analogous formations are presented by certain valleys in the lower Alps.

Beyond the Ras-Fartak headland, which faces Cape Guardafui (Ras-Asir) on the African mainland, and which presents a formidable appearance at the entrance of the Gulf of Aden, the coast of Arabia falls gradually eastwards in a series of broad semicircular bays. Here the two coast ranges known as the Jebel-Kamar and Jebel-Sabhan still raise their rugged peaks over 3,000 feet above the sea; but the border chains are everywhere broken by broad depressions, through which the sandy deserts of the interior become intermingled with the shingly beach. As is usually the case along low-lying shores, the marine bed itself shoals very gradually in front of these desert plains. At the foot of the lofty Jebel-Sabhan depths of 6,000 or 7,000 feet are met within four miles of the coast, whereas the Kurian-Murian bay, which is encircled by low-lying terraces, scarcely exceeds 300 feet for 30 miles seawards. Here the true coastline is formed by the three islets, the rocks, reefs, and the granitic island of Hullaniyah, which stretch east and west across the bay. South of this coastline the bed of the ocean falls so abruptly that within a few miles of Hullaniyah (1,700 feet) the plummet records depths of over 10,000 feet. Towards the north-east the large island of Masirah (Mosera), which stretches for a distance of 42 miles parallel with the coast, can scarcely be distinguished from the neighbouring mainland. None but the lighest craft venture to navigate the intervening channel, which is everywhere obstructed with dangerous sandbanks.

But the highlands begin again at the Ras-el-Hadd, the easternmost cape of the peninsular, where the seaboard trends suddenly towards the north-west. Here the Oman plateau corresponds with that of Yemen at the opposite extremity, and if less extensive, it is certainly as high, possibly even higher, than that upland region.

When the whole peninsular comes to be trigonometrically surveyed, its culminating point will probably be found not in the south-western but in the south-eastern highlands.

From the Ras-el-Hadd to the Ras-Masandam, terminal headland commanding the entrance of the Persian Gulf, the mountains rise almost everywhere sheer above the deep waters. Here no space is left for an intervening Tehamah, or low-lying coastland, except west of Mascat, where an extensive bay is fringed by the plains of Batna or El-Batinah. The Oman mountains present a striking contrast with those of Yemen, both in their utterly barren aspect and the rugged character of their slopes. Compared with the Mascat hills, those of Sinai itself are "a garden," says the botanist Aucher Eloy. Their limestones, slate, and serpentine

Fig. 198.—The Mascat Highlands.

Scale 1 : 3,750,000.

walls, gray, brown, green, or red, stand out vividly in the glare of a trophical sun, lighting up the varied forms and tints of their sharp outlines, prominences, anfractuosities, and the thousand details of their stratified or crystalline veins.

The Oman Highlands.

Speaking generally, the Oman highlands may be said to consist of an advanced range skirting the coast from the Ras-el-Hadd to Mascat, then of a transverse ridge running westwards from the Mascat heights, and of a third chain, which bends round to the north-west and north, terminating in the basalt headlands of the Ras-Masandam. All these ranges really belong to the same orographic system, whose

convex and concave curves, complicated with the many irregularities of the lateral spurs, are developed mainly parallel with the seacoast. South of Mascat the hills have a mean altitude of about 3,000 feet; but even here one of the summits at the intersection of the transverse chain is said to be 5,500 feet high. This is the Jebel-Fatlah, or Kariet of the Admiralty charts. West of it the main range exceeds 6,500 feet at many points, while one peak, visible from the sea, towers to an estimated height of over 10,000 feet. This is the highest summit so far recorded

Fig. 199.—Masandam Peninsular.

Scale 1 : 720.000.

in the Oman uplands. The town of Shirazi, at their southern foot, stands at an elevation of 6,250 feet above the sea. In winter these highlands are covered with snow; but what strikes the Arabs even more than the temporary snows are the permanent grassy slopes of the Oman ranges. Hence the title of Jebel-Akhdar, or "Green Mountains," given both to the highest crest and to the whole system. Yet the prospect commanded by these summits embraces but few verdant tracts, except on the cultivated terraces watered by numerous irrigating canals.

A superb termination to the last Arabian highlands is formed by the narrow

peninsular which at the entrance of the Persian Gulf projects in a series of sharp needles towards the Iranian coast. At the extremity of the promontory, which in the Jebel-el-Harim attains an extreme height of 6,850 feet, the prevailing basalt and phonolitic rocks are indented in the form of a stag's antlers. Deep inlets ramify amidst the cliffs, while the Ras-Masandam, the most advanced headland, is severed in two by a profound fissure, which forms a gloomy channel winding between vertical walls 1,000 feet high, and accessible to large vessels, although scarcely more than a stone's throw wide.

In all ages this bold promontory, which separates the sheltered waters of the Persian Gulf from the dreaded abysses of the Indian Ocean, has been regarded by mariners as a sacred spot. The most advanced cliff of Cape Masandam is the "Rock of Salvation" or of "Welcome," above which hover the protecting spirits of sea and air. When he launches on the boundless deep, the Arab navigator offers a sacrifice to this rock, and on his return presents it his thanksoffering. The Hindu also strews the waves with flowers and cocoanuts in honour of the local deities, or else sends adrift a model of his vessel with its variegated sails and little cargo of rice. The omen is favourable if the tiny craft reaches the shore in safety; otherwise dangers of all kinds are imminent, and prudence enjoins a return to port.

The Central Ranges and Harras.

The mountains traversing the centre of the peninsular across the Nejed plateau are connected westwards with the Red Sea coast ranges, northwards with the Idumæan highlands. They may be said to begin west of the Euphrates deserts with the craters and lava streams of the Harra, or "Burnt Land," which stretches south of the Jebel-Hauran. Owing to the stony nature of the soil, rendering it inaccessible to pack animals, the Harra has hitherto remained unexplored nearly throughout its whole extent. Nevertheless this chaotic region is traversed by some narrow tracks winding along the beds of its tortuous wadies. These tracks have evidently been formerly cleared by the shepherds in order to facilitate the passage of their flocks along the grassy hollows.

The rocks of the Harra are in many places disposed so symmetrically that they seem distributed in geometrical figures by the frequent vibrations of the soil. They might almost be said to have even been arranged according to their size and outlines. In one place all the large blocks seem grouped intentionally together; in another all the smaller stones; elsewhere disintegrated earth or ashes. The stones are not disposed in heaps, but cover the surface with a single layer of contiguous fragments, as if some enormous slab of stone had suddenly been broken into pieces of various size and shape. Here and there occur the so-called *ka*, that is to say, perfectly bare tracts, where the hard ground, baked as it were by the sun, is fissured and cut into pentagons and hexagons like the crystalline columnar basalts. Not a blade of grass sprouts amid these blackened squares, but the interstices of the geometrical pattern are filled with detritus of all kinds drifting before the winds.

Here the landscape almost presents the appearance of so much *tulle* thrown over the face of the desert.

In some places the scattered blocks acquire an aspect of remarkable regularity from the contrast of their various tints. The south side of these blocks, turned towards the burning sun, becomes perfectly smooth and polished; while the opposite sides, exposed to the northern winds, are usually clothed in a mantle of grayish lichen. The traveller journeying southwards from Damascus sees nothing before him except dull grey rocks, which on retracing his steps everywhere present a dazzling appearance to his gaze. Hence in these solitudes of Harra nothing is easier than to determine the points of the compass.

East of the land of Madian stretches another Harra, also of volcanic origin, but known only to the Arabs. From this region come the basalt mortars and millstones employed by the natives of the neighbouring coastlands. Yakut's "Geographical Dictionary" makes mention of no less than twenty-eight "harras" between the Jebel-Hauran and Bab-el-Mandeb. But the "Harra of Fire," which stretches north-east of Medina near the town of Kheibar, is the only one that is stated to have shown signs of activity during the historic period. According to an old tradition it was in eruption six hundred years before the time of Mohammed, and again ejected molten lavas under the caliphate of Omar. The sacred mountain of Ohod forms part of this volcanic system.

The English explorer, Beke, searching for the true Sinai of Scripture, thinks he has discovered it amongst the volcanic cones of one of the Arabian Harras. By its action he supposes might be explained the cloud of smoke during the day and flame at night by which the Israelites were guided across the wilderness. Most of the craters which under a different climate might have become lacustrine basins, are here occasionally filled with soft muddy bogs. But the moisture soon evaporates, leaving nothing but slippery argillaceous layers very difficult to traverse.

The tracts crossing the "Burnt Lands" can be recognised only by a slight polish produced on the stony surface by the passage of caravans for hundreds or thousands of years. In some places, however, the rock is so hard that no impression has been made upon it by the traffic, and here the proper route is indicated only by the droppings of the camels flattened and plastered to the rock by the Bedouins. The Habir district, traversed by Huber, resembles the Safa of Syria in its general igneous aspect. It presents the appearance of a mass of molten iron dotted over with enormous bubbles, some still intact, others cracked and sharp as glass at the line of breakage. In some places the circular striæ of lava produce the effect as if they had been churned up from underground cauldrons.*

The Jebel-Aja, northernmost range in Nejed, branches from the nucleus of hills where is situated the "Harra of Fire." The Nejed plateau itself is already from 3,500 to 4,000 feet above sea level, whereas the relative height of the various ridges intersecting it averages not more than 1,800 or 2,000 feet. According to Blunt, the loftiest crests scarcely exceed 6,000 feet of absolute elevation. Their spurs consist of yellow or red stratified sandstones, which become blackened under atmospheric

* Buckingham, "Travels in Mesopotamia."

influences. Seen from the plains, many of these rocky barriers seem completely black, and it is no longer possible to distinguish the Aramæan and Arabic inscriptions, the figures of camels, wild goats, and other animals engraved on the surface by ancient explorers.

South of these spurs stretches the Jebel-Shammar (Shomer), properly so called, whose pink granite rocks have preserved their brightness, blending in exquisite

Fig. 200.—Sandstone Hills near Meskakeh.

harmony with the afterglows of the setting sun. The crimson veins of some of these rocks, say the Arabs, are the blood of Cain still flowing from the face of the mountain. Above the Haïl oasis the granite chain abruptly terminates, and beyond this point it is continued eastward by no other hills. But southwards rises the parallel Jebel-Shelma range, which skirts the northern edge of the Kasim plateau. In the Shelma mountains Huber has determined the presence of some extinct craters, and one very rugged mass still bears the name of Gehenna, or "Hell."

A depression partly filled in with drifting sands, and according to Blunt varying in altitude from 4,000 to 5,000 feet, limits the northern escarpments of the Nejed, separating it from the Jebel-Toweik, another group of uplands, to which the term Nejed is more specially reserved. Toweik, that is, the "Wreath," is probably indebted for this name to its crescent shape. It develops a vast semicircle, whose northern extremity lies parallel with the coast of the Persian Gulf, sweeping from that point round to the south and south-west, where it merges in the plateau east of the Mecca highlands. By Palgrave the mean elevation of the whole range above the surrounding plains is estimated at from 1,000 to 2,000 feet. Yet its outlines present an imposing aspect, everywhere terminating in rugged cliffs, which rise abruptly above the desert. In the endless labyrinth of their glens and valleys, the escarpments also spring mostly sheer from the ground.

Consisting almost exclusively of limestone formations, the Toweik highlands look like a vast group of pyramids, each built up in two or three sections. The upper terrace is generally level, except where in one or two places granite nuclei pierce through the limestone layers. In spring the higher, and still more the lower sections, are carpeted with herbage. Here and there large trees are seen in the more humid districts of the plateau, and the Sedier (Sidr), that is, the northern province of Nejed, is even indebted for its name to a plant in appearance resembling the oak. Towards the east the sandy terrace forming the pedestal of Nejed terminates above the coastlands of the Persian Gulf in steep cliffs, which may be regarded as the true continental escarpment.

The Northern Steppes and Deserts.

The region, upwards of 200,000 square miles in extent, which occupies the whole neck of the Arabian peninsular between the Trans-Jordan highlands in the north, those of Idumæa and Harra in the west, the Jebel-Shammar in the south, and the Mesopotamian plains in the east and north-east, forms the so-called Hamad, known also as the Badiet-el-Arab, or Badiet-esh-Sham, that is, the "Arab" or the "Syrian Wilderness." This is the dreaded Shol, which the riverain population of the Euphrates climb the cliffs of their valley to contemplate, but into which they never venture to penetrate. Yet a large portion of this tract is a true steppe, where the Bedouins find abundance of pasture for their flocks. Some districts, however, even apart from those of igneous origin, are entirely covered with stones. In one place we see nothing but pebbles like those of the seashore; in another fragments of granite, sandstone, flint, limestone, pounded together as in a mortar; elsewhere sands rolling away in vast billows separated by intervening shingly salt-marshes. Some portions of the plateau also present the appearance of regular tables surmounted by cones and prisms, the remains of a disintegrated upper plateau. Such formations are true *hamadas*, like those of the western Sahara.

These solitary wastes, which are crossed along the track of springs and wells from Bagdad to Damascus by the British and Turkish Government couriers, are the formidable region which, in the early wars of Islam, Khaled traversed at the head

of 9,000 men. No similar march was ever made before; none has ever since been attempted. After following the Wady-Sirhan depression, Khaled, avoiding the Hauran highlands, at that time held by a Byzantine army, plunged boldly into the desert, and advanced directly on Tadmor. For five days the only drink of men and horses was a little camel's milk, or the water contained in the stomachs of the slaughtered camels. Yet the army reached the Tadmor oasis safely, and being soon after joined by the army of Syria, the united forces overthrew the numerous Byzantine hosts.*

North, east, and south of the Jebel-Shammar and of Nejed all is desert. The sand penetrates even between the two plateaux like a strait between two islands. These sandy tracts, which skirt the hills, and which may be crossed without danger from oasis to oasis, are the so-called *Nefuds*, branches of the great desert stretching south-eastwards between Nejed, Hadramaut, and Oman, and occupying nearly one-fourth of the whole peninsular. Of these Nefuds the best known is that traversed by Palgrave, Pelly, Guarmani, Doughty, by the caravans of Wilfrid Blunt and Huber. Nevertheless the various accounts of travellers differ greatly, which is doubtless largely due to the different seasons of the year, when the journeys were made. Palgrave crossed it in twelve days towards the end of July, during the torrid season. The Blunts travelled in the middle of January, and being better provided with food and water, they covered the ground from station to station in half the time. Yet even they narrowly escaped with their lives on the sixth day.

The northern edge of the desert is a stony waste like an abandoned seashore, and here a few dunes of white sand fringe the beach of what looks like an ancient sea. Other tracts at the foot of the Nejed hills are composed of granitic gravels known by the name of *batha*. But the Nefud, properly so called, consists exclusively of a coarse-grained red sand, almost crimson after heavy rains or in the humidity of the morning dews. Under the mid-day sun, when the traveller feels the first chills of fever creeping over him, when he looks half-blinded around for some spot on which his wearied eyes may rest with relief, he seems to be wading through a sea of fire and blood, veritable waves of flame tossed about by the winds. On the surface of the Nefud the rolling sands, which in some places reach a height of over 300 feet, seemed to Blunt to have no particular direction, but to be strewn in disorder over the wilderness. Palgrave compares them to long ocean billows, such as those regular heavy swells developed under the influence of the trade winds. According to this observer their normal direction would seem to be from north to south. He even attempts to explain this parallel disposition of the dunes, attributing them not to the action of the atmospheric currents, but to the rotatory motion of the earth. Revolving round its axis from west to east the rigid crust of the planet meets with a certain resistance from the shifting layers of sand resting on the surface. As in the equatorial zone, this movement of the globe is retarded by the oceanic waters, which thus give the first impulse to the marine currents, so in the Arabian deserts the sands travelling with a retarded rotatory motion become slowly but gradually shifted from east to west.

* William Muir, "Annals of the Early Caliphate."

Another remarkable and hitherto unexplained phenomenon of the desert are the so-called *fulj* described by Palgrave, Blunt, and Huber, and which are found in large numbers in the Nefud. These curiously symmetrical hollows penetrate in some places through the whole thickness of the surface sands down to the hard rocks or argillaceous beds on which they rest. Palgrave speaks of some 800 feet deep; but of those explored by Blunt none exceeded 230 feet, while Huber observed one 265 feet in vertical height, at the bottom of which three wells had been sunk. These chasms vary no less in breadth than in depth, ranging in this respect from a few dozen to several hundred yards. Their normal form is that of a regular cirque with uniformly inclined slopes, and their general appearance is that of the traces left by the shoes of some gigantic horse bounding over the wilderness. All have their convex side facing westwards or north-westwards, with a ravine on the east side caused by the erosive action of heavy tropical downpours. Within the cirques the sloping sides are not uniform, those turned towards the south being usually more precipitous than those facing the east. A crescent-shaped dune is generally heaped up by the wind to heights of from 10 to over 30 feet above the edge, sloping gently towards the desert, but very abruptly, on the side of the hollow. From time to time the sandy mass falls in, and it seems remarkable that all the fulj have not been gradually filled by these "sand-slips." So far from this being the case, most of them have still an open space at the bottom, while their slopes are overgrown with brushwood, a sure indication of the extreme slowness with which their contours are modified.

From the top of a rocky bluff projecting like a pyramid above the sands, Blunt commanded an extensive view of a whole series of fulj, whose normal direction seemed to be from east to west, but developing a serpentine curve analogous to that of the wadies. In fact their origin may probably be due to the action of running waters in the depressions. The streamlets, flushed by the heavy rains disappearing in these chasms, wash down the sands into the fissures of the ground. In some cavities traces are even visible of ancient lakes. Such is the cirque, 16 square miles in extent, in which is situated the village of Jobba on the southern edge of the Nefud near the first spurs of the Jebel-Shammar. The depth of this basin is at least 200, according to Palgrave 400 feet, below the level of the plain. Huber regards its concentric sides simply as channels furrowed by heavy rains in the more friable layers of sandstone.

The northern Nefud is entirely destitute neither of vegetable nor of animal life. The ground is in some places overgrown with the ghada, a species of euphorbia, whose branches are often intertwined with the tendrils of the yerta, a kind of liana resembling the vine. Even the sands support a savoury pasturage, generally to the exclusion of all other vegetation. In the spring the nomads drive their flocks to these parts of the desert, where they remain some seasons for weeks together, their only drink being the milk of their camels. Doubtless the bleached bones of men and animals scattered along the caravan tracks between the oases, are silent witnesses to the dangers besetting the routes across the desert. But the Arab none the less loves the wilderness passionately. Here he feels himself free

and happy; here the soul becomes most deeply centred in itself; here it enters into the most complete possession of all its moral forces. Hence it is not perhaps surprising that most of the eastern religions have been revealed to their founders in the wilderness. "The more arid the land, the more man becomes absorbed in himself," is a very old saying. Even European travellers are as profoundly affected

Fig. 201.—View of a Fulj in the Northern Nefud.

as the Arabs themselves by the impressions of desert nature. When they return to lands cut up into a thousand sections by enclosed estates and town walls, they feel, like the Bedouins, a sentiment of weariness and depression.

The Dahna, or Southern Desert.

But into the frightful "red desert" of the Dahna, which stretches south of Nejed towards the Hadramaut coast, no man dares to venture. In this region the

maps still show a wide expanse absolutely destitute of all geographical nomenclature. Future exploration may possibly reveal a few oases on the skirts of this ocean of sandy dunes. Where it was approached by Wrede north of Hadramaut, El-Akhaf, as the desert is here called, showed not the slightest trace of vegetation. From the plateau which rises 1,000 feet above the dreary waste, nothing meets the eye except wave after wave on this trackless sea of interminable sands. Nowhere can a trace be detected of vegetation; not a bird is seen to hover above these lifeless wastes.

Amid the boundless ocean of the Dahna desert are found those formidable abysses known as the Bahr-el-Safi, or "Sea of Safi," from a probably legendary king, who was here swallowed up with his whole army. The Bedouins pretend that vast treasures lie buried at the bottom of these chasms guarded by protecting genii. Hence they make no attempt to recover these riches, and in their excursions on the edge of the desert they carefully avoid the haunted abysses, which may be easily recognised at a distance by the dazzling whiteness of the sands, contrasting sharply with the yellow tints of the surrounding dunes. Wrede had to approach the spot alone. At the edge of the stony chasm his stick sank in the white sand as in water; a stone weighing over two pounds attached to a string about 400 feet long also disappeared, and five minutes afterwards the string itself had been entirely swallowed up. The Bedouins, blanched with terror, assisted from a distance at this interview with the invisible spirits.

The remarkable fluidity of these Bahr-el-Safi sands can be explained only by the presence of underground streams, lakes, or other liquid bodies, as naphtha or petroleum. The petroleum springs flowing on the slopes of the neighbouring cliffs may possibly be the source of such subterranean lacustrine basins. It is more probable, however, that below the sandy surface flow running waters revealed at intervals by the wells where the fine dust is heaped up by action of the winds. According to the reports of the Bedouins the line of chasms winds for a journey of eight days along the skirt of the desert.

Climate of Arabia.

The Arabian peninsular is comprised within the zone of south-west monsoons. Except in the region approaching the Mediterranean, all the moisture it receives is brought by these trade winds. But having first to traverse, or at least to skirt, the African continent, they have already discharged most of the humidity obtained from the equatorial seas before reaching Arabia. Hence the quantity discharged on the peninsular is insufficient to cover it with vegetation. The lofty highlands alone, penetrating into the upper atmospheric currents, arrest the passing clouds, and receive a certain quantity of rain, which feeds intermittent torrents, and in some places permanent springs and rivulets. On the low-lying plains the limit of the arable zones coinincides with the last streamlets supplied by the moisture precipitated as rain or snow on the uplands.

Sometimes the first breath of the monsoon, towards the end of March or

beginning of April, is accompanied by a few heavy showers, eagerly welcomed by the peasantry. But the torrential rains coincide more usually with the period of great heats. The normal season of summer storms varies greatly in the different parts of the peninsular, according to latitude, the relief of the land, its proximity to the Mediterranean or Indian Ocean, the deviations or variations produced in the atmospheric currents.

In the Yemen highlands the heavy rains fall usually in the normal tropical season, that is to say, at the end of the month of June and in July. During this season the rock of Aden occasionally receives a rainfall of from six to seven inches; but it may happen that no moisture is precipitated. During the three years from 1869 to 1872, the cisterns of Aden were filled only once. In Hejaz the rains are expected generally in December, at Mascat and in the Oman highlands in December and January. The average rainfall is sufficiently abundant in the inhabited parts of South Arabia, as far as the sixth parallel of latitude. Hence the prayers for rain, which constitute such an important feature in the ordinary cult of the northern tribes, form no part of the ritual in the southern regions.

But whether copious or not, the zone of highlands on which the moisture is discharged is not sufficiently extensive to send down regular streams to the coast, at least through surface watercourses. On the western slope not a single river flows throughout the whole year across the Tehama to the Red Sea. All, without exception, are *misyals* (*masils*, *masilahs*), analogous to the Italian *fiumari* and *nullahs* of India. The water is speedily exhausted in the riverain arable lands, and even to irrigate the surrounding fields it is often far from sufficient. Frequently whole communities await the fertilising waters for weeks and months; the anxious gaze is fixed on the cloudless skies, the winds are consulted, and every atmospheric phenomenon carefully observed; business is suspended, and tribal warfare itself arrested. Crowds assemble to scrutinise the cloud gathering on the horizon, and when it bursts, when the freshets rush down through the mountain gorges, flooding the sandy beds of the wadies on the plains, the advancing waters are escorted by the multitude and everywhere hailed with songs and shouts of joy.

But a part only of the rainwater is available on the lowlands for agricultural purposes. Wherever the sands and gravels of the desert begin, there the streams disappear. Some, however, again well up in the depressions of the ground, where they develop small oases, when the water has not become too saline in its underground channels. Some is even collected in permanent or temporary lakes, flooding the argillaceous cavities. When the water of these basins evaporates, some of them remain encrusted with white saline efflorescences, while those where the water had been fresh present a hard brown surface, broken into symmetrical fissures. But even at a slight distance the glare of the solar rays seems still to be reflected as on a liquid or burnished ground. Nowhere else is the mirage of still waters produced more frequently, and the illusion is rendered more complete by occurring in places where water might naturally be expected, that is, in the basins of evaporated lakes. The effect might be compared to the fanciful conception in "Alice in Wonderland," where the smile of the cat remains after the cat has disappeared.

Although quite as scarce in Arabia as in Persia and Afghanistan, the water-supply is husbanded with far less skill in the peninsular than in those regions. Except in some of the Oman upland valleys, in certain parts of Nejed, and the districts about the holy cities, the peasantry do not understand the art of intercepting the streams as they issue from the hills, and conducting them to the cultivated tracts by a system of underground canals with wells sunk at regular intervals. But on the other hand, in most parts of Arabia the people have constructed the so-called *birkets*, or dressed stone reservoirs, and have almost everywhere sunk deep wells. Of these the most remarkable are those which Zobeida, wife of Harun-ar-Rashid, caused to be excavated in the live rock on the pilgrims' route between Mecca and Bagdad. Some are fully 230 feet deep, but most of them are now waterless, with perhaps a little mud at the bottom.*

In Oman the area of the oases in the upland valleys has been enlarged by means of the so-called *felej*, which resemble the kanats of the Persians, and which were probably constructed under their direction during the course of the last century. These felej, which are generally communal property, are kept in a constant state of good repair, and where exposed to the incursions of marauding tribes, are defended by regular lines of fortifications. Every spring is thus commanded by a fort in a region where it is more important to protect the water-supply than the villages themselves.

The development of the felej system throughout the peninsular might easily double the sedentary population. The wadies now intermittently flushed during the tropical rains might become fringed with cultivated tracts and centres of population, and a partial restoration might be effected of the old watercourses or dried up rivers, some of which, like the Wed-Ermek or Rumma, traversed the peninsular in its entire breadth, reaching the left bank of the Euphrates above the Tigris confluence. There can be no doubt that some rivers rising in the Nejed uplands still flow below the surface as far as the Persian Gulf. Along the whole of the west side of this basin springs of fresh water bubble up in the marine depths, and the island of Bahrein is to a large extent indebted for its vegetation, and consequently for its population, to its copious streams, whose true source is on the mainland. In many places the divers descend to the bottom of the shallow strait separating Bahrein from the peninsular in order to fill their skins with the fresh water flowing from the fissures of the rocks. In the island of Moharek also, the women and young girls balancing pitchers on their heads wade some 50 or 60 yards into the sea in order to draw their supplies of fresh water from a neighbouring rocky islet. On the coast of the mainland nearly all the springs are thermal, and a large number sulphurous, a circumstance attributed by Palgrave to the igneous forces not yet extinct in this region. In many places the hot springs have their rise in the midst of ashes and lavas. Near most of these springs stand small eminences, formed probably by the sands cast up from the surrounding depths.

Arabia is one of the hot regions of the globe. The thermometric equator being deflected towards the northern hemisphere by the heat developed in the

* Huber, "Bulletin of the French Geographical Society, 1884."

Dahna sands, skirts the southern shores of the peninsular. Aden, Makallah, and Mascat are amongst the districts described as "hells" by Europeans, who have more than once fallen victims to sunstroke merely by exposing themselves for a moment to the solar rays reflected from the white walls of these towns.

In the island Aden the mean winter temperature is higher than that of summer in Europe. Even in the month of April, and during perfectly calm weather, the glass not unfrequently rises to 104° F. in the shade at Mascat, and in the Tehama west of the Assir highlands it often records 107° F. But in midsummer, and when the wind blows from the desert, the heat becomes far more intense, exceeding 120° F. in many places. After five years of constant observation, Stanley estimates the average temperature of Jeddah as high as 88° F. by day and 83° F. by night. Wetzstein even assures us that the rocks themselves are frequently rent by the fierce solar rays. According to Huber, on the plains of Central Arabia the mean temperature of the springs, which can scarcely differ much from that of the atmosphere, varies from about 83° to 85° F. Even the natives suffer much from the sultry climate of Arabia, where the coastlands are quite as unhealthy as those on the Iranian side of the Persian Gulf. Here the inhabitants are subject to rickets, and ailments of all sorts, especially ophthalmia and blindness. Fully one-tenth of the population on the coast of Oman, we are told by Keppel, is either bleareyed or stone blind. But on the other hand, certain regions in the interior of the peninsular are amongst the most salubrious on the globe. Such especially are the plateaux of Nejed, where the oppressive heats of the deserts and Tehamah lowlands are greatly mitigated by the greater mean altitude of the land. The granite and sandstone ranges of the interior being exposed to breezes from every quarter, and even to the influence of the polar atmospheric currents, there is here a regular succession of alternating temperatures from day to night. Living under conditions so favourable to the full development of the physical forces, the inhabitants of Nejed are a robust, vigorous race, of a swarthy complexion, and noted especially for their clear and resolute glance. At corresponding altitudes and temperatures the cities of Yemen are far less salubrious than those of Nejed. The air, heavy with marine vapours, circulates less freely than on the central tablelands. Arrested on one side by the Abyssinian, on the other by the Arabian highlands, it finds no escape from the Gulf of Aden and Strait of Bab-el-Mandeb. Hence fevers are very pevalent not only on the low-lying coastlands, but even in the upland valleys of Yemen.

Although comprised within the meteorological range of the south-west monsoons, Arabia in other respects enjoys a great diversity of breezes, caused mainly by the encircling waters, which cause the regular atmospheric currents to deviate from their normal course. The Gulf of Aden and Sea of Socotora on the south and south-east, the Red Sea on the west, the Gulf of Oman and Persian Gulf on the east and north-east, lastly the Mediterranean on the north-west, constitute so many laboratories for the formation of secondary winds, which modify the primitive currents of the trade-winds. Following the shiftings of the centres of heat, which are found sometimes on the mainland, sometimes on the sea, the local breezes become incessantly modified along the coasts, increasing, retarding, neutralising, or

even changing the course of the general currents. These currents themselves often become completely modified by the character of the regions over which they pass. Thus in one place humidity is brought by the southern, in another by the northern winds. So with the pestiferous sheluk, or dry simoon, which blows from the east for the inhabitants of Yemen, from the west for those of Bagdad. In the Nefuds westerly gales prevail, as is evident from the form of the sand dunes, and from the generally easterly inclination of all vegetation.

But in the meteorological conditions of the peninsular, the essential point is the deflection of the south-west monsoon to the south-east. The great aerial movements are directed mainly along the two parallel mountain systems, between which are enclosed the two lateral inlets of the Red Sea in the west and the Persian Gulf in the east. After penetrating through the straits of Oman and Bab-el-Mandeb, the normal direction of the monsoon is altered, causing it to ascend the two inlets along the line of their main axis. In the same way the winds blowing from the Iranian plateaux and from the Moabite or Madian highlands, are engulfed in these marine depressions, which they henceforth follow to their outlets in the Indian Ocean. Thus is produced a regular alternation of ascending and descending trade-winds, by which navigation is greatly facilitated.

But although the highways to the ocean were thus from the first clearly indicated by nature herself, it required none the less great daring to penetrate through the "gates" or straits into the stormy high seas, where the swift and shifting marine currents seemed to be controlled by no fixed laws. Yet the mariners of Oman, of Hadramaut and Yemen, undaunted by these perils, became at one time the great carriers for all the trading populations along the shores of the Indian Ocean, from Mozambique to the Sunda Islands. They even long contended with the Portuguese for the empire of these regions. During the early days of Islam, the Arabs also enjoyed a large share in the commerce of the Mediterranean, whence the number of Arabic terms discovered by Kremer in the language of European seafaring nations.

The Persian Gulf.

Although resembling each other in their meteorological conditions and in the high temperature of their water, the two great inland seas of the peninsular differ greatly in other respects. The Persian Gulf is entitled to be regarded as a sea only on account of its extent, which is estimated at 100,000 square miles. But it is very shallow, averaging, probably, not more than 200 feet in depth. Supposing the present level and other physical conditions remain unchanged, the time might be approximately calculated when this marine basin must be completely filled up by the alluvia brought down by the Shat-el-Arab, just as the northern section of the gulf has already been filled up and converted into the plains of Mesopotamia. The liquid mass is far too inconsiderable to be affected by the general currents of the Indian Ocean. In the sea of Oman at the entrance of the gulf, the marine correspond to the atmospheric currents, one penetrating through the Strait of

Ormuz during the prevalence of the southern monsoon from May to September, another setting steadily in the opposite direction towards the Indian Ocean for the rest of the year, that is, during the season of the northern winds. In the gulf itself it has been found impossible to determine any order or system in the oscillations of the streams, which appear to be quite superficial and liable to be modified by every fresh breeze.

These shallow waters are interspersed with a large number of islands, of which those on the west differ greatly in their physical aspects from those on the east side of the gulf. The latter, lying near a steep coast, are themselves mountainous, rising abruptly above a sea free of reefs, whereas those on the Arab seaboard are low and sandy, like the adjacent mainland. The extensive semicircular bay comprised between the Ras Masandam headland and Katar Point is studded with these islets, to which the district is perhaps indebted for its Arabic name, Bahr-el-Benat, or "Sea of Daughters." West of Katar the Gulf of Bahrein is also obstructed with numerous islands, islets, and sandbanks scarcely rising above the surface. One of these, the largest Arab island in the Persian Gulf, bears the name of Bahrein, or the "Two Seas," derived, doubtless, from the two large bays stretching east and west of the Katar peninsular. Oppert identifies Bahrein with the Tylos or Tilvun of the ancients, one of the sacred places where, before the time of written history, Chaldean civilisation had its origin. From Tylos came that "fish god" who in the Babylonian myth bore the ark of the human race over the deluge.

Both the Persian Gulf and Sea of Oman are amongst the marine basins which most abound in animal life. Such is the multitude of fishes, that no perceptible impression is made on their numbers by the thousands of Arab smacks constantly busy in these teeming waters. Large nets cast in depths of 200 fathoms, and requiring thirty to forty hands to work, capture vast quantities, which when dried in the sun serve with date-paste as the staple of food for all the surrounding Arab populations. Reduced by this simple process to the appearance of bits of sticks, the produce of these productive fishing-grounds is forwarded to the interior of the peninsular, to India, Zanzibar, and other parts of the east coast of Africa. The fry, which it would be difficult to export, is either returned to the sea or used to manure the Mascat gardens and the cultivated districts of Batina.

According to the statements of Alexander's admiral, Nearchus, whales were also formerly very common in the Sea of Oman. The ichthyophagi, or "fish-eaters," of the Makran coast are said to have built their houses with the bones of this cetacean, which has now become very scarce. But the *balænoptera Indica*, probably the largest still existing marine animal, attaining a length of 90 feet,* is still met by mariners in these waters. Here also microscopic life is so exuberant that sometimes for thousands of square miles the colour of the sea is changed to a milky or a blood-red hue. At night it is all aglow with phosphorescence, and in many places the track of vessels is marked for miles and miles by a luminous streak, like a fiery dragon ploughing the deep. These weird effects are regarded by the Wahabites as

* Blyth, "Journal of the Asiatic Society of Bengal, 1859."

flashes from the lower regions, while the seafaring populations take them for the gems of the sirens, which sparkle only in the water, but become tarnished or evaporate when exposed to the air.

In the Bahrein Sea, and generally along all the west side of the Persian Gulf, pearl-fishing is the chief occupation of the maritime populations from May to October. Although not so white as those of Ceylon and Japan, the pearls found in the Arabian seas are larger and of more regular form. They also long retain their golden tint, whereas those of Ceylon rapidly lose their brightness, especially in warm climates. The Bahrein pearls are also more esteemed for the medical virtues attributed by the Arabs and Persians to these secretions of the oyster. Nor has the supply begun to fail in the Persian Gulf, as it has in so many other places. In the Bahrein archipelago alone the industry gives employment to about fifty thousand hands, while secondary stations are established in the neighbourhood of the marine beds along the whole coast from Koveit, near the mouths of the Shat-el-Arab, almost to the entrance of the gulf.

By long established use, the pearls belong to the whole maritime population, who have alone the right to dive and collect the oysters in the fishing-grounds. Nevertheless most of the profits are secured beforehand by the Hindu and Arab money-lenders, who by extortionate charges have reduced the unfortunate natives engaged in the industry to little better than galley-slaves. The profits are supposed to be equally regulated between the owners of the boats, the divers, and the crews. But even before the division takes place all these shares are seized by the usurers, leaving but a sorry pittance to the "toilers in the deep." Of these there are altogether about seventy thousand, with six thousand smacks, while the yearly value of the fisheries is estimated at £500,000, or scarcely more than £7 per head.*

The grounds are still worked in a very primitive manner. The divers, weighted by a stone attached to their feet, their nostrils closed with a horny clasp, their ears plugged with wax, descend in depths of from 30 to 60 and even 100 feet, returning in fifty or sixty seconds with as many oysters as they can scrape together. They will repeat this dangerous descent usually seven or eight times a day, exposed all the time to the attacks of sharks and swordfishes, to whom on an average about thirty fall victims every year. The finest pearls and most iridescent mother-of-pearl are found chiefly in the neighbourhood of the already-mentioned springs. By the natives the origin of the gems themselves is attributed to the particles of matter contained in the fresh water, hence productive returns are anticipated especially after heavy rains.

The Red Sea.

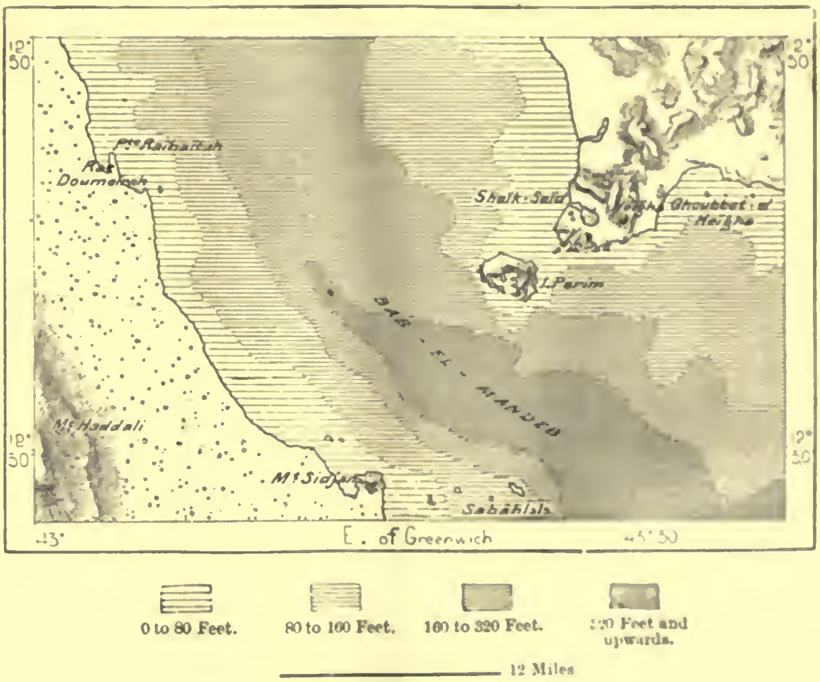
This extensive basin, which reckoning in a straight line from the port of Suez to the Strait of Bab-el-Mandeb, separates Arabia from Abyssinia and Egypt for a distance of 1,300 miles, is fully entitled from its great depth to the name "sea." Forming a vast fissure between the two converging continents, it presents in its

* Grattan Geary, "Through Asiatic Turkey."

central section a continuous cavity considerably over 3,000 feet deep, and at two points, under the twenty-third and twentieth parallels of latitude, the plummet sinks into abysses of over 6,600 feet.

Off the coast of Lith a depth has even been recorded of no less than 7,600 feet. Of the two gulfs into which the basin ramifies to the right and left of the Sinai peninsular, that of Suez, although preserving its main axis, has not the true character of the fissure. It nowhere exceeds 220 feet, with an average depth of probably not more than 160 feet. Hence it can only be regarded as a lateral trough merely due to erosive action. The true continuation of the Red Sea is the Gulf of Akabah, where depths of some hundred fathoms have been measured within close proximity to the coast. In the central parts of this cavity Moresby determined

Fig. 202—Bab-el-Mandeb.
Scale 1 : 685,000.



soundings of over 1,650 feet in the year 1833. It seems evident that the Red Sea, the Gulf of Akabah, and the Ghor depression now traversed by the Jordan and flooded by the Dead Sea, have all the same geological origin. They must be regarded as longitudinal crevasses forming so many sections of a vast fissure about 1,800 miles long. The inner basins would be at once converted into so many "Dead Seas" were the bed of the Gulf of Akabah or of the Strait of Bab-el-Mandeb to be upheaved above sea level, just as that of Arabah in Idumea has already been upheaved.

Southwards the long fissure of the Red Sea proper terminates not far from Moka, in the Hanish or Jebel-Zukur archipelago, which forms a sort of bar, with

scarcely 300 feet of water in its deepest parts. But at its entrance the Strait of Bab-el-Mandeb being scoured by the marine currents of the Indian Ocean, is no less than 650 feet deep in some places.

As in the Persian Gulf, these marine currents correspond in the Red Sea with the atmospheric movements. During the prevalence of the regular summer monsoon the waters from the Indian Ocean penetrate northwards through the Strait of Bab-el-Mandeb. But when the northern gales resume the preponderance, during the winter months, the currents set steadily southwards, and the Red Sea then becomes a sort of marine affluent of the Gulf of Aden. The difference of sea level along the shores of Abyssinia and Arabia is about 2 feet, according to the direction of the trade-winds. But besides these general movements and surface undulations caused by local breezes, there appears to be a general displacement of the waters in the direction from south to north. Being destitute of a single perennial affluent, and lying under almost cloudless skies, the Red Sea receives but slight contributions of fresh water, and may be regarded as a vast marine basin affected only by evaporation. All the water supplied by rain and the wadies would form a scarcely perceptible liquid layer, if distributed evenly over its surface, whereas the quantity converted by heat into vapour would be sufficient sensibly to lower its level, were the loss not replaced by currents from the Indian Ocean.

In his "Marine Geography," Maury estimated at about 24 feet the liquid mass yearly evaporated on the surface of the Red Sea. Since the experiments made by Salles on large basins, this estimate of the American hydrographer is known to have been far too high. But even reducing the annual loss by evaporation to not more than 3 feet, this would suffice to completely exhaust the waters of the Red Sea in the course of a few generations. Allowing a mean depth of 1,300 feet for the whole depression, four centuries would suffice to evaporate its liquid contents, and long before the end of this period the saline waters, reaching the point of saturation, would everywhere be hemmed in by crystalline cliffs. Hence the constant loss caused by evaporation must be made good by currents setting in from the Indian Ocean through the two channels of Bab-el-Mandeb. The yearly quantity thus received represents a volume equal to that of a river such as the Ganges. But the surface waters of the Red Sea being driven by the prevailing northern winds for half the year southwards in the direction of the ocean, compensation must be effected by a corresponding increase in the submarine current setting towards the inland basin. But however swift this current may be, it must lose a portion of its contents by evaporation, causing a corresponding increase in its saline density. From Aden to Suez the proportion of salt in the Red Sea increases gradually from rather more than thirty in the south, to forty-one and even forty-three parts in one thousand in the extreme north.

Since the Red Sea has been placed by the Suez Canal in communication with the Mediterranean, exchanges also take place between the Gulf of Suez and the basin of the Bitter Lakes. This basin, which had been almost completely exhausted by evaporation, has already been replenished by the Red Sea, which has supplied it with over 31,500,000,000 cubic feet, together with its flora and fauna. By the

oscillations of ebb and flow the canal itself is being constantly renewed from the same source. At full tide, which is not felt at Port Said, the level of the Red Sea at Suez is over three feet higher than that of the Mediterranean, at the opposite extremity of the canal. The difference of level is on an average 32 inches for the Gulf of Suez, but much less for that of Akabah.

European travellers proceeding to India through the canal and Red Sea much dread the high temperature of this basin during the summer months. The few days occupied in the passage are severely felt when the atmosphere is calm, and still more when the parched desert winds prevail. Amongst the various hypotheses

Fig. 203.—Guriah Island, Gulf of Akabah.

advanced to explain the origin of the epithet "Red" from remote times applied to this sea, one of the most plausible is that which assigns to the term the meaning of "Torrid." The "Erythræan" Sea of the ancients was far more extensive than the present basin bearing that name. It comprised all the marine gulfs washing the shores of the southern peninsulars of the Asiatic continent, thus answering to our Indian Ocean, or to all the tropical waters known to antiquity. The ruddy skies reflected in these waters, the dazzling glare of the rocks and mountains surrounding them, the glowing atmosphere pervading these regions, may possibly have earned for the Indian Ocean, and especially for its north-western inlet, the title of "Red Sea." But according to most modern commentators, the appellation

is to be referred rather to the Púnt, or "red" race of men, who dwelt on both sides of the gulf, that is, in Africa and Arabia, whose descendants migrating northwards became the Phœnicians of the Mediterranean seaboard. But it must be confessed that no phenomenon peculiar to the Red Sea seems sufficient to explain a name it has borne from the remotest times.

This basin is diversified with numerous islands, which are grouped in archipelagoes along its eastern and western shores. Amongst those on the Asiatic side there are some evidently belonging geologically to the Arabian peninsular. Such are Hasani, north of Yambo, Disan, and Karam, in the Loheiyah archipelago. But others of different origin rise far from the coast in the deepest parts of the basin. Thus the Jebel-Teir, which lies west of Loheiyah in the very middle of the central cavity, forms a cone of lavas and volcanic ashes, whose base is from 700 to 800 feet below the surface, above which its summit attains an altitude of over 900 feet. Teir is the only still active volcano in the Arabian waters. In 1883 it was the scene of a violent eruption of vapours, such as are often discharged from Stromboli. All the other insular volcanoes in the southern part of the gulf, Jebel-Zebair, Jebel-Zukur (2,000 feet), the Great and Little Hanish, the crater of Perim between the two channels of Bab-el-Mandeb, are cooled massess of red and black lavas.

But the lofty islands, whether of volcanic or sedimentary origin, are rare in comparison with the number of low-lying rocks of coral formation. Nearly one-third of the Red Sea is obstructed with these relatively more recent islets or reefs, visible from a distance by the white line of encircling surf. Along the Arabian coast the chain of coral banks is almost continuous from Loheiyah Bay to the entrance of the Gulf of Akabah, being interrupted at intervals only by deep inlets facing the mouths of the wadies. The fresh water, and possibly the impurities brought down from the interior by these intermittent streams, prevent the growth of the rock-building polypes. On the African side the *sheb*, or coral barrier, although less continuous, advances in some places farther seawards than on the opposite coast. In the latitude of Massawah, more than half the sea is filled with reefs, between which the main navigable channel is contracted to a width of about 60 miles. In this endless labyrinth of straits and passages navigation is extremely dangerous, not so much to large steamers, which keep to the deep central highway, as to the Arab craft which hug the shore, and are obliged to cast anchor during the night. In spite of all their skill and foresight, the ablest pilots run the risk of running aground in the midst of this perpetually shifting maze of intricate channels.

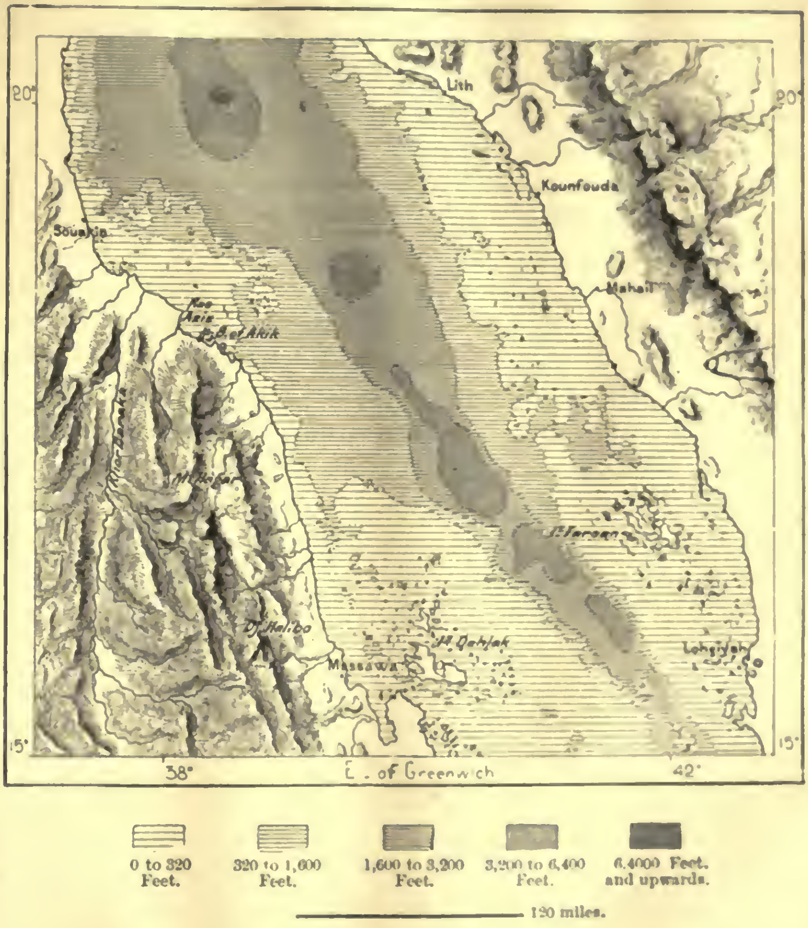
Few marine basins present a more marvellous spectacle than that revealed on the bed of the Red Sea through depths of 60, 80, and even 100 feet of water transparent as crystal. Here are seen the submarine "fields" of zoophytes with their myriads of tendrils, ribbons, buds, and flowers, some irregular, others developing geometrical patterns, all radiant with the loveliest tints of diamond, ruby, and sapphire, an infinite world of endless form and colour. In the midst of these plant-like animals flourish numerous algæ, and hundreds of other vegetable species, by which the dangers of navigation are much increased. For the waves pass with-

out breaking through this dense vegetation, gradually losing their force, and leaving no surf to indicate the presence of reefs.

At the change of the monsoons, especially in the months of October and November, myriads of fishes of every species are cast up dead on the beach at Perim and Aden. To prevent the atmosphere from being poisoned, all the inhabitants are obliged to lend a hand in burying these heaps of putrescent

Fig. 204.—Coral Banks in the Central Basin of the Red Sea.

Scale 1 : 6,500,000.



animal remains. This wholesale mortality is attributed by the natives to the presence of some venomous description of milt, while King regards it as the effect of electric phenomena caused by the changes of the seasons.* Myriads of organisms perishing beneath the incessantly renewed layers of successive organisms suffice to feed the springs of oily consistency which ooze out along the coast. Here, also, a certain degree of upheaval is evidently going on beneath the surface, for the level of innumerable coral islets stands at present several feet above the actual level of the sea. On this point the testimony of all travellers since the time

* "Geographical Magazine, 1877."

of Niebuhr is unanimous. All have noted old coral banks and marine beds now connected with the mainland. Certain islets have become lagoons closed to navigation, while some old islets have been transformed to peninsulars. On the east coast of Arabia, near the Strait of Oman, the contrary phenomenon of subsidence seems probably to be at work.

Flora of Arabia.

In contrast with the extreme richness of the marine is the relatively monotonous character of the peninsular land flora. The northern section of Arabia lying between Idumæa and the Euphrates is comprised within the zone of steppe vegetation. This region is almost entirely destitute of forest-trees, while the small woody plants and the grasses flourish only during the spring months. Towards the end of May all nature resumes its uniform dry and dreary aspect; all plants except the mugwort and mimosa become withered and assume the uniform tint of the surrounding soil.

South of the Syrian steppes Central Arabia comes within the desert zone, equally poor in vegetable species. Nevertheless trees are not wholly absent, and numerous varieties of the date-palm are found in all the oases. In the Nefud itself are several large plants, such as the *gadha*, with white trunk and greyish foliage; the *talh*, with round leaves growing sparingly on its prickly branches; the bright green *nebaa;* the *sidr*, a species of acacia, every branch of which resembles a tuft of delicate feathers. In the valleys and on the sandy plains grows the *ithel*, a species of larch peculiar to Arabia; and the sands of the Hamad yield an abundance of the *chema*, a variety of the truffle.

Certain districts of the desert are absolutely bare, without shrubs, or herbage, or vegetation of any kind beyond the simple lichens adhering to rocky surfaces. Even in the region of the Tehama along the coast the flora is extremely poor. The peninsular of Aden has yielded only ninety-five species, of which about one-third are peculiar to Arabia. While the vegetation presents on the whole the characteristics of the desert, various plants indicate a transition from the flora of the Sahara to that of Sudan and India.

The region whose flora most resembles that of Sudan is the upland tract lying between the inland deserts on the one hand, and the Red Sea, Indian Ocean, and Gulf of Oman on the other. The highlands of Assir, Yemen, and Hadramaut may be regarded as belonging to the same zone as the opposite mountains of Abyssinia and Somaliland. In its vegetation as well as in its fauna, its ethnical relations, and historic evolution, Yemen is rather an African than an Asiatic region. Here the true geographical limits are formed not so much by the depression of the Red Sea as by the line of the great desert. The forests of the south-western uplands consist chiefly of diverse species of acacia, nearly all more or less gummiferous. Euphorbiaceæ and succulent plants are also very common, and amongst the hitherto undetermined species the botanist Hildebrandt mentions a type intermediate between the boxwood of Madagascar and that of the Balearic Islands.

A valuable plant in the domestic economy of the inhabitants of Yemen is the *kat* (*catha*, or *celastrus edulis*), a shrub whose buds and young leaves have a more stimulating effect than tea itself on the nervous system. It is even said to possess to some extent the intoxicating properties of hashish. From remote times the South Arabian highlands have been famous as the land of drugs and aromatic essences. Hence came the cassia and the senna, still known in commerce by the name of "Alexandrian senna." Myrrh, also, a gum secreted by the bark of the balsam (*balsamodendron*), is one of the products of South Arabia and the Somali coast, formerly mentioned with pearls and frankincense amongst the precious commodities by which the Phœnician traders were attracted to the shores of the Red Sea. At present this produce comes chiefly from Bombay. The plant which yields the *olibanum*, or incense, also grows on the Hadramaut coast ranges, although said to have originated in the African hills on the opposite side of the Gulf of Aden. The gum secreted by the Arabian plant is of inferior quality to that of the African species, and is collected, not by the Arabs themselves, but by the Somali people, who understand the art of tapping the plant, for the produce of which they find a market in Makalla and the other southern seaports.

On the plateaux and highlands the settled populations cultivate the useful plants of the temperate zone, such as wheat, maize, barley, millet, lentils, the vine and European fruits, besides various dyewoods. Cotton and tobacco are also among the economic products of Arabia; but the sugar-cane, formerly widely cultivated in the south of the peninsular, is now found only in gardens. On the lowlands the chief alimentary plant is the date, of which, according to an Arab writer quoted by Burckhardt, as many as a hundred and thirty varieties are found in Hejaz alone. "Honour the date-tree," said Mohammed, "for it is your mother." Arabia should probably be regarded as the original home of the *phœnix*, a tree diffused by the Phœnicians throughout the Mediterranean lands, after they had themselves introduced it into Syria at the time of their migration northwards.

On the other hand the coffee, regarded as the most characteristic plant of the peninsular, is really of African origin. Before the fifteenth century of the new era no native or foreign writer mentions it among the products of Arabia. Nor does it appear in the trade of the world until the time of the Portuguese expeditions to the Indian Ocean. But it is then already spoken of as the most precious berry of Arabia Felix, and it was universally supposed to flourish in the districts about Moka, from which seaport it was shipped for Europe. The researches of modern botanists show that the coffee-plant does not grow wild in Arabia, and that it is indigenous in the African region of Kaffa, whose name it still bears. The peninsular was, however, the first country to systematically cultivate this shrub, which has taken so great a part in the trade of the world, in its economic history, and even, according to certain panegyrists, in its intellectual and moral development. To extend coffee-plantations, European wars have been undertaken, vast territories have been conquered in the New World, in Africa, and in the Sunda Islands; millions of slaves have been captured and transported to the new plantations; a revolution has been accomplished, entailing consequences incalculable in their complexity, in which

good and evil are intermingled, in which frauds, warfare, oppression, wholesale massacres go hand in hand with commercial enterprise, with the increase of knowledge, the intercourse of the remotest peoples and continents.

At present Arabia takes but a small share in a trade which received its first impulse from this region. Scarcely a fifteenth part of the coffee consumed in the whole world comes from the Yemen highlands.* Farther east the shrub grows in Hadramaut nowhere beyond the Jebel-Yafia. Nevertheless the Yemen berry, which the Arabs take as a decoction, not as an infusion, as in Europe, is still of prime quality, probably exceeded in aroma only by that of the Yungas district, in Bolivia. The Arab plantations, which are carefully cultivated, lie between the altitudes of 1,300 and 4,500 feet, in broad terraces along the slopes of the hills, each with a reservoir feeding innumerable irrigation rills. The plant grows to a height of 35 or 40 feet, and yields about five-and-twenty yearly crops before it is exhausted. Always in blossom, always in fruit, the plantations present the most varied effects of colour, in which the snow-white flower and coral berries blend their lovely tints with the delicate ever-shifting green of the foliage. It is a delightful spectacle, animated by the presence of myriads of brilliant butterflies and bright-feathered birds, the whole presenting a striking contrast to the changeless monotony of the blue canopy above.

Fauna of Arabia.

To the poverty in vegetable species corresponds that of the animal kingdom in the peninsular. Where plants are deficient, animals cannot be numerous, and on the skirts of the deserts wild beasts can scarcely find a lair in the midst of those vast open spaces, easily traversed by the Arab horse in all directions. Nevertheless the lion, panther, leopard, hyena and fox, are still met, and, as in Asia Minor, jackals prowl in packs around the nightly encampments. The wild goat and ibex dwell in the sandy and rocky regions, while a large species of antelope, here called a "wild-cow," has its home in the Nejed hills. Gazelles are also numerous in the solitudes, even where no water is found, whence the popular belief that they never drink.

During the first half of the nineteeth century, the wild-ass and ostrich still frequented the Hamad wilderness, and they still survive farther south in the plains surrounding the Nejed plateaux. In Yemen the fauna, like the flora, resembles that of the African highlands on the opposite coast. Thus several species of monkeys occur as far north as the Jebel-Kora, east of Mecca. Along the shores and inlets, where fish abound, birds of prey such as the eagle, vulture, and falcon, are also numerous, while the weaver-bird, turtle-dove and pheasant, find a cover in

* Yield of coffee in the various parts of the world, according to Neumann-Spallart:—

	Metric Quintals.		Metric Quintals.
Brazil in 1880	2,600,000	Haiti in 1879	232,000
Java in 1879	1,128,800	Other West India isles in 1879	332,000
Ceylon in 1879	330,000	Other parts of the world	250,000
Venzeula in 1879	276,000	Arabia	30,000

the thickets of the interior. Some of the islands in the Persian Gulf, frequented by myriads of water-fowl, contain deposits of guano, like the groups of islets off the Peruvian coast.

The Arabian fauna also includes reptiles, such as the cobra, lizards, scorpions, poisonous spiders. According to the popular belief current in Persia and Babylonia, the Oman territory and the districts above the Nefuds and "Red Desert" are the original home of those prodigious clouds of locusts, those "hosts of the Lord," which are borne on the breeze to all the surrounding lands. Those of the Iranian Ghermsir coastlands come from the Arabian Tehamas. During the prevalence of the south winds from these districts, the rigging of vessels anchored in the port of Bushir is sometimes covered with these rapacious insects. A ship traversing the Strait of Ormuz, on board of which was the traveller Bruce, was suddenly enveloped in a cloud of locusts from Arabia, which in a short time devoured all the sails and cordage, obliging the captain to stay his course. The locusts are in their turn readily consumed by the Arab Bedouins.

The Camel.

Although possessing no elephants and but few oxen, Arabia is perhaps the first country in the world for its riding, racing, and pack animals. The camel has not been found in the wild state in the peninsular, as in the steppes of Central Asia. But if the original stock has disappeared, Nejed, often described as the "Mother of Camels," at least possesses the most numerous varieties of this inseparable companion of the Bedouin. From Oman come the swiftest, from the Hadramaut highlands the most intelligent dromedaries. Every province has its special breed, whose superior qualities are the boast of the natives.

According to the Arab legend, the camel and date were created by Allah with the same earth as Adam. In the terrestrial paradise they dwelt with the first man, and will accompany him to the future world, a belief symbolised in the old custom of allowing a camel to perish of hunger at its master's grave. Since the time of Mohammed this cruel practice is no longer observed, while this quadruped continues to be the intimate associate of the Arab throughout life, admitted to his feasts, and even to his religious ceremonies. From the back of a camel Mohammed proclaimed his laws, and the pilgrims gathered in thousands at the foot of Mount Arafat are still addressed by the preacher from the same living pulpit. The first mosque was built on the spot where the prophet's she-camel lay down after the flight; the cupola of Meshed-Ali (Nejef) marks the place where the mortal spoils of Ali were removed from his faithful bearer; from the back of a camel Mohammed ascended into heaven. At its birth the foal is fondled as an infant, and "A child is born to us," cry all the members of the family. It is treated with affectionate care, charms are hung round its neck to scare the evil eye; it is never beaten, but encouraged by words and song to make its first steps. Later on it becomes the constant associate of its owner, who holds long communings with it, protects it from insult, and takes as a personal affront any abusive language addressed to his mute companion. Like

any other member of the family or the clan, the faithful animal may become a cause of blood-feud, for "the blood of the camel demands the blood of man" (Wellsted).

As many as six hundred names and epithets, or even a thousand, as Chardin assures us, are required to describe and glorify the camel. Thus does the Arab of the wilderness endeavour to express his sense of gratitude to an animal, but for whom he could not hope to escape from his foes and maintain his proud independence amid his sandy wastes. Without the camel he must have long since bowed his neck to a foreign yoke, sharing the fate of those despised fellahin who guide or draw the plough on the banks of the Nile and Orontes.

The Arab is said to be satisfied with little; but all that he owns must be of the choicest quality. His dates, his perfumes, his coffee, are the best in the world. So with his domestic animals, which are in some respects the finest and the most attached to man. The dog, like the camel, is a member of the tribe, of the clan and family, whose lot he shares with a boundless devotion. The Arab ass also, and especially the Hasa breed, is a noble beast, whose name conveys no sense of scorn, as in the West. For here, while preserving its marvellous frugality, patience, and tenacity, the ass has lost the fine proportions, graceful carriage, and proud spirit, by which he is still distinguished in the peninsular.

The Horse.

But the most characteristic domestic animal is the horse, whose superiority over all others, except the English throughbred, is universally recognised. In the Nefuds and steppes adjacent to Syria and the Euphrates are found the most shapely steeds, the most mettlesome and enduring, and at the same time the gentlest and most submissive to the rider's hand or voice. But these choice breeds need abundance of rich pastures and water, hence are found only in very few parts of the peninsular. While preserving the purity of their blood, thanks to their complete isolation, they nevertheless gradually degenerate in Nejed and in the southern provinces. In the Hasa territory they are not much larger than ponies, but nevertheless "little lions" in fire and courage.

The true home of the Arab horse are the grassy northern tracts, those vast plains resembling the pampas of the Argentine States. Here the race has been fully developed from the earliest times, for here it found a suitable climate and nourishment, combined with the essential condition of boundless space. But in this region, bordering on the great historic highways, the breed has also been exposed to numerous crossings. On the old bas-reliefs of the Chaldean monuments are seen animals, apparently of "Turanian" race, which differed greatly from the Arab type, and which seemed to have been chiefly used as beasts of burden. These were the progenitors of the heavy pack-animals still found in the amphitheatre of hills encircling the Mesopotamian plains, animals which in the eyes of the Bedouins are unworthy of the name of horse.

In north Arabia most of the tribes watch with sedulous care over the purity of their stock. The Montefiks alone and the other Lower Mesopotamian communities

have been induced by a love of gain to cross their animals with those of Persia and Turkestan, in order to obtain horses of a larger size, for which high prices are obtained from the Indian dealers. The thoroughbred Arab, such as we see him, especially amongst the Anazeh tribes, is of much smaller stature than his English congener. The head is larger, the mouth more delicate, the eye at once larger and softer, the back shorter, the muscles more prominent, the legs slimmer. A marked characteristic of the breed is the tail, which at full speed always stands out horizontally. These animals would certainly be distanced on the racecourse by the English thorougbreds and their European offspring. But size for size they would probably compete successfully, and on long journeys would also have the advantage, thanks to their greater staying powers and frugal habits. They "live on air," says the poet. Reared in the family, as the constant playmates of the children, treated with invariable kindness and affection by their masters, they have developed a gentle disposition which nothing can ruffle. Such vices as jibbing or rearing to throw their rider are unknown; and full of confidence in their guides, they shirk no obstacle, and boldly face any danger.

Unfortunately this admirable race is threatened with extinction. Faultless specimens become daily rarer, and in some communities have already entirely disappeared. This is due mainly to the incessant intertribal warfare, usually terminating in wholesale razzias and the hasty sale of the captured animals to the first bidders. But the very superstitions associated with the traditions regarding their purity of blood are also a potent cause of degeneracy. In the eyes of the Arab unsullied or at least unquestioned lineage has more value than beauty or perfections. To be prized the animal must belong to the *khamsa*, that is to one of the five *kehilan* breeds, which are traditionally sprung from the prophet's five favourite mares. Below these there are sixteen other races noble enough to require the birth of every foal to be regularly attested in the presence of witnesses. Henceforth the animal bears round his neck a little pouch containing the authentic proofs of his origin. On this point there is no question of fraud in Arabia, where the genealogy of a horse is too sacred a thing to be tampered with by the lowest cheat.

Outside the five first and sixteen secondary breeds, all horses are classed as *kadish*, that is, "unknown." However shapely or perfect in other respects, they are held in no esteem; nor would any native faithful to his traditions ever consent to cross his "blue-blood" stock with any of these "beasts without a pedigree." The consequence is that the pure breed is gradually dying out, and even the most powerful sheikhs already find the greatest difficulty in keeping up their studs. At the time of Palgrave's journey in 1862, the finest stock was found at Riad, among the Ibn Saûds, rulers of Nejid; but in 1878 the Blunts found the emirs of Hail, in the Jebel-Shammer, the largest owners of horses in the peninsular.

Inhabitants of Arabia.

The Arab is as jealous of his own as of his horses' racial purity. Simple in his habits and speech, he is none the less proud of the "blue blood" which flows in

his veins from a period anterior to all written records. He has never submitted to a foreign yoke, and for many thousand years his forefathers have roamed freely over the boundless solitudes of the interior. To this noble race of pastors, who believe themselves to be the firstborn of men, belongs the time-honoured title of Bedouin, a term so misunderstood and despised in the West. The Bedouins are the Arabs in a pre-eminent sense, the "People of the Plains," the "Saracens," if at least the primitive meaning of this term be "Men of the Sahara" or desert. The true Bedouins are mostly of middle size, shapely and very thin, but active and much stronger than might be supposed from their slim figures. Very dark, or of an ashy grey complexion, they are noted for their regular oval features, high forehead and black piercing eye, which, however, acquires a somewhat sinister glance from the habit of knitting the brow when peering into the distant horizon.

As in Persia, close alliances are the rule, so that in polite conversation "cousin" comes to be synonymous with "spouse." The Bedouins rapidly age, being "grey-beards" in their fortieth, and seldom reaching their sixtieth, year. But if their life is short it is rarely broken by ailments. From infancy accustomed to lie on the hard ground, to endure the mid-day sun, to dispense with long sleep or abundant nourishment, eating but once a day, and never tasting strong drinks, beyond the slightly stimulating *lebben*, or "sour milk," they enjoy uniform good health, free from most of the maladies common in the West. "I am the son of patience" says a native heroic poem, and endurance is certainly the cardinal virtue of the Bedouin. He faces hunger and thirst, heat and cold, great hardships or long journeys without complaint. Ailing or wounded, he withdraws to a corner and suffers in silence, ready alike for death or recovery. Gentle towards women and children, he reserves his wrath for the strong, although in war or marauding expeditions seldom guilty of wanton cruelty. According to the prescriptive right sanctioned from time immemorial in the wilderness, every tribe can lift its hand against its neighbour; but custom requires pillage to be as free as may be from bloodshed. Even slaughter on the battlefield must sooner or later be paid by the *tar*, or vendetta, and has given rise to intertribal feuds that have lasted for ages. The capital failing of the Bedouin is not cruelty but greed. He loves the "shining pieces," silver more than gold, but he loves them as a child delights in glittering toys. But for all his avarice he places the duties of hospitality above personal gain, for "Silver lost is found, honour lost is lost." The guest is sacred in the Arab camping-ground, and the foe himself is welcome once he has touched the tent-rope.

The Bedouin recognises no master, not even the clan or tribe itself. He clings to his kindred only because he shares with them common joys, interests, and honour. So close is this feeling of clanship that, although at first rejecting his doctrine, most of Mohammed's people refused to forsake him, and with one exception condemned themselves to voluntary exile for two years. When differences arise on important affairs the two parties agree to separate in a friendly way, and thus the tribes become subdivided into endless groups, intermingling and clashing like the waves of the sea. Some clans formerly living in the Nejed are

now encamped on the upper Euphrates, and two groups of the same family become separated by hundreds of miles. Every tribe has its sheikh, usually distinguished by illustrious lineage, but otherwise enjoying no hereditary claims. Elected by his equals, he is deposed by them when he ceases to please. Besides the duties of hospitality, his special function is to decide disputes in concert with the elders. But though he may advise and arbitrate, his decisions lack the force of law, relying rather on custom and public opinion than on penal sanction. Certain sheikhs, combining a noble pedigree with wealth and upheld by strong alliances, enjoy considerable authority so long as they understand how to identify their interests with those of the tribe, which never forgets or abdicates its primordial rights.

The sedentary Arabs, who occupy all the arable tracts round the coast and on the skirt of the Mesopotamian steppes, are naturally diverse in origin and diversely intermingled with foreign elements. Although grouped in one nationality by their common speech, there can be no doubt that the primitive stock has been largely modified by Persians and Hindus in the east, by Somali, Abyssinians, and negroes in the south and west. In these regions the purest type is found in Upper Yemen and Hadramaut, where dwell the *Arab-Ariba*, the "Arabs of the Arabs," so named in opposition to the Ismaelites, or *Musta-Ariba*, that is, "assimilated or mixed Arabs" of the northern regions. Local tradition and history recognise in the south-west the presence of an ethnical type different from that of the nomads of the interior. Known in legend and genealogical myths by diverse names, it is now grouped under the collective designation of the Hymiarites, the Homerites of the Greeks, that is, the "Red Men," supposed to be the Punt or Puna ancestors of the Phœnicians. From the remotest times the Hymiarites or Sabæans of Arabia Felix were a civilised people acquainted with the art of letters and maintaining constant intercourse with Abyssinia and India. The rocks of Yemen and Hadramaut bear inscriptions anterior to the Christian epoch, which have recently been copied by Arnaud, Maltzan, and Halevy. Thanks to these daring explorers, a new branch of archæology has been founded, carrying the historic retrospect some centuries farther back than heretofore. The Hymiarites themselves have ceased to exist as a distinct nationality, their culture having been absorbed in that of the Mussulman Arabs. But there are still some tribes in Hadramaut, such as the "Deibir," or "Wolves," who claim descent from the old stock. The Sabæan speech, intermediate between the Arab and Abyssinian, also survives in a dialect still current in the Mahra district, where the natives are described as of an almost white complexion.

All Arabs alike now call themselves Mohammedans, the last tribes who had maintained their old pagan rites having been reduced by the Wahabites at the beginning of the present century. This old polytheism consisted chiefly in the worship of the stars represented by idols, three hundred and sixty of which were set up round the black stone of Mecca. This simple cult is reflected in that of the Mussulmans themselves, whose Koran, or sacred book, admits in a modified form the Jewish and early Christian records, saints, and miracles, but is otherwise mainly composed of more or less contradictory precepts. The essence of the system is a

strict monotheism, represented by the old local deity, Allat or Allah, victorious over

Fig. 205.—Types and Costumes.—Group of Arab Women.

the neighbouring gods, just as the Jewish Yahveh had triumphed over Baal, Kamosh, and the other divinities of the Canaanitish tribes. The worship of the

one God, the right granted to the faithful of enslaving or exterminating their enemies, an absolute claim to the wealth of this world, and the comfortable assurance of inheriting that of the future life, make up the sum and substance of Islam. The sudden triumph of Mohammed's followers, the vast plunder acquired in their first campaigns, seemed to confirm these promises, and naturally attracted converts from every quarter. Thanks to its simple teaching, Mohammedanism was readily accepted, even by independent peoples, and still continues to spread in Africa, India, and China.

The Wahabites.

But the fervour of the early times is now met only amongst a few fanatical communities, such as that which takes its name from its founder, Mohammed Ibn

Fig. 206.—Derreyeh.
Scale 1 : 100,000.

4,400 Yards.

Abd-el-Wahab, a native of Nejed, who began his preaching between the years 1740 and 1750. Banished by his own people, he took refuge with Saûd, sheikh of an Anazeh tribe, who became the champion of the "New Islam." Their aim, however, was not so much to found a new sect as to revive the former simplicity of faith and purity of life. They condemned the pomp of ceremonies, sumptuous mosques, tobacco-smoking; they rejected the pretensions of the mollahs, denounced all prayers addressed to Allah through the Prophet or other intercessors, and undertook to resume the holy war against the infidel. The religious reform became com-

plicated by a social revolution. Multitudes of fugitives or outcasts from other tribes rallied round the new apostle, and towards the middle of the last century most of Nejed, with its capital, Derreyeh, had been converted by the sword to the Wahabite doctrines. Then the circle of their conquests was extended beyond the central plateaux to Kerbela, which was pillaged of its vast treasures in 1801, and in 1803 and 1804 to Mecca and Medina. But their predominance in the peninsular lasted scarcely more than ten years. The Sultan, fearing for his prestige as the heir of the caliphs, found it necessary to re-establish his authority in the holy cities, and the Egyptian forces, after recovering the Hejaz in 1813, occupied the Wahabite capital in 1817.

Since that time their power has gradually waned, and at present the chief central state is that of Jebel-Shammar, whose capital is Hail. Nevertheless the Wahabite propaganda has been continued beyond the limits of Arabia, and especially in India, and they are probably now more numerous, although politically weaker, than ever. In the peninsular itself a large part of the population has remained indifferent to the movement. Here the religion of the nomads is summed up in the formula "God is God." But to Allah, for them an impersonal entity, they neither pray nor return acts of thanksgiving. Traces even of the old Sabæism seem still to linger amongst them, and various tribes are said to prostrate themselves before the rising sun. At the same time the Bedouins are amongst the least superstitious of peoples. They trouble themselves little with the mystic sense of numbers, waste no time in the interpretation of dreams, and if they occasionally wear charms, they seem to be ashamed of the practice. Beyond a vague idea of metempsychosis, they entertain few metaphysical speculations regarding a future state, and seek for a moral sanction, not so much in the idea of rewards and punishments beyond the grave, as in the general opinion of the tribe on good and evil. But this opinion is far more severe than in European societies. Abuse of confidence, petty thefts, and fraudulent dealings are unknown. No Bedouin will ever betray the trust reposed in him by a friend; strict honesty in all business matters is the rule even among the marauding tribes.

Topography of Arabia.

On the north-east Arabian coastlands forming the present Turkish province of El-Hasa, the chief places are *Koveit,* which may be regarded as the natural outport of the Euphrates basin, and *Fao,* at the mouth of the Shat-el-Arab. Koveit occupies a position analogous to that of Alexandria, Venice, and Marseilles, lying like those cities at some distance from the fluvial basin. Its trade, especially with Bombay and the Malabar coast, is yearly increasing, and it is usually spoken of as the future terminus of the Euphrates Valley railway, although lying to the west of the Shat-el-Arab. Farther south are the ports of *El-Katif,* near the Bahrein Islands, and *Akir* (*Aghir, Okeir*), outport of *Hofhof* (*Hofhuf*), capital of Hasa, which lies some 60 miles inland in a district yielding probably the best dates in Arabia. Abundant thermal springs occur both here and in the neighbouring town of *Mubarrez.*

Menamah, capital of Bahrein, occupies the north end of the island over against

Moharek on an adjacent islet. As centre of the pearl fisheries, Menamah is visited during the season by numerous traders, especially from India, and the port owns over one thousand five hundred boats engaged in this industry. The Sheikh of Bahrein, one of the richest potentates in the East, is head of the sixteen clans of the Attabi tribe, who number fifty thousand skilled agriculturists, and who have converted the island into an extensive garden, yielding good crops of wheat, lucerne, onions, and other vegetables, besides dates.

A headland crowned by a fortress completely conceals *Mascat*, capital of Oman, from vessels approaching from the south. The city is encircled by a crescent of bare red igneous rocks, at both extremities of which stand two formidable-looking

Fig. 207.—Koveit.

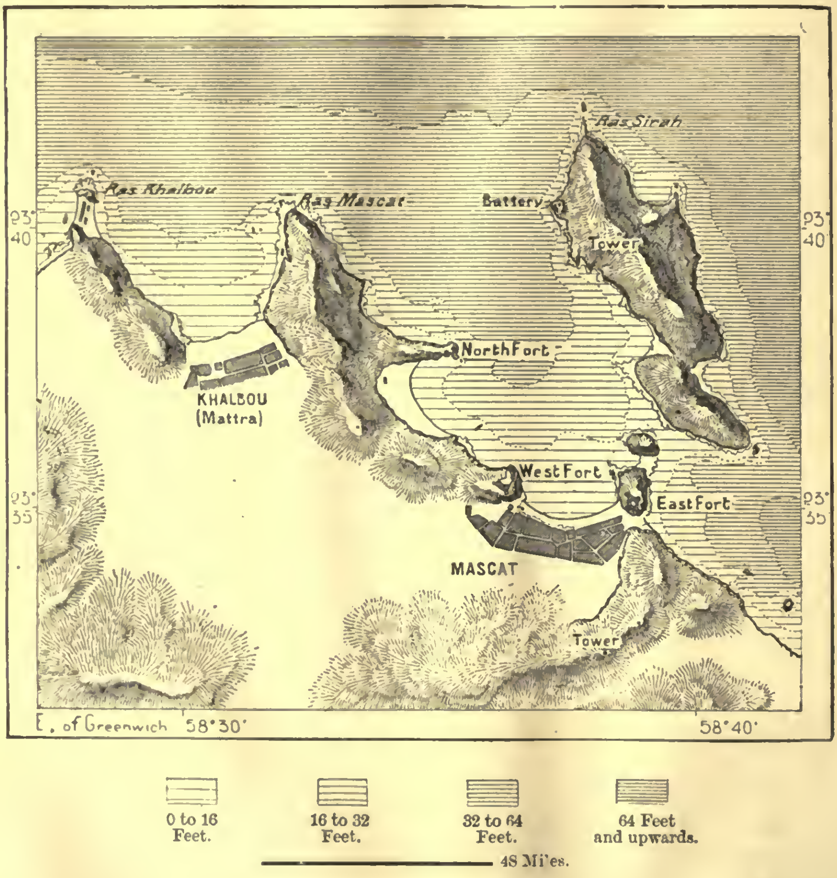
Scale 1 : 350,000.

castles. Mascat is one of the hottest places on the globe, and its climate is far too enervating for Europeans. But its extensive trade has attracted numerous settlers from India, Baluchistan, Persia, Abyssinia, Somaliland, and negroes from every part of the East African seaboard. The harbour, from 60 to 160 feet deep, is well sheltered, except from the north-west gales. Its export trade in fish, dates, and other fruits, besides cotton fabrics, averages considerably over £1,000,000 a year, while the imports scarcely amount to a fourth of that sum.

Oman, like Yemen, had a historic evolution almost independent of the rest of the peninsular, from which it is separated by the desert. Hence its relations were chiefly by water with the neighbouring coasts of Persia and India. The Arabs, who in mediæval times visited the Eastern Archipelago and China, and who

contested the supremacy of the Indian Ocean with the Portuguese, all came from Oman. Later on the country was reduced by Nadir Shah; but after the withdrawal of the Persian garrisons an independent state was established, stretching for over 1,800 miles along the coast from the Katar peninsular in the Persian Gulf to Mirbat Bay, in the Arabian Sea. Till the middle of the present century it also included the adjacent islands on the Iranian coast, as well as the seaports of Baluchistan and East Africa as far as Zanzibar. Its fleet was the most powerful in the Indian Ocean, but was unable to suppress the pirates infesting the Persian Gulf

Fig. 208.—Mascat.
Scale 1 : 250,000.



and Arabian Sea, against whom the East India Company had to send three successive expeditions in 1809, 1819, and 1821. At present the ruler of Oman only maintains a few gunboats in these waters. His revenue is estimated at £25,000, including a subsidy of £6,000 from the Anglo-Indian Government, true sovereign of Mascat.

Amongst the numerous towns scattered along the rich and populous coast of Batnah (El-Batinah), west of Mascat, the most important are *Barka, Soveid, Soham, Sohar, Lowa, Shinaz,* and *Fajrah.* Sohar, capital of the district, is an industrial

place, whose weavers, goldsmiths, braziers, and blacksmiths are the most skilful in the whole of Arabia. Unfortunately it has no harbour, and its export trade has been eclipsed by that of *Sharjah* (*Sharkah*), on the west side of the peninsular, which partly closes the entrance of the Persian Gulf. Here also there are some flourishing industries, including excellent carpets, cotton goods, and delicate gold and silver filigree work.

Few Europeans have visited *Bireimah*, *Neswah*, *Minnah*, and the other towns in the interior of Oman. *Beni-Abu-Ali*, in the Jailan district, recalls the defeat of a small British force, which was retrieved by the expedition of 1821. *Sur*, the seaport of this district, a little west of the Ras-el-Hadd promontory, is said to take its name from the Syrians formerly settled in Oman. To this state also belongs the port of *Mirbat*, nearly opposite the island of Socotora. Farther inland are the ruins of the ancient city of *Dhafar* (*Dofar*), which was formerly a populous place, but which has now been replaced by the more westerly towns of *Suk-el-Bazir*, *Shehr*, and especially *Makalla*, in the Hadramaut and Mahrah territories. Makalla serves as the mart of three rich valleys hitherto visited by Wrede alone, and by him described as perhaps the most densely peopled districts in the whole of Arabia. Towns of six thousand inhabitants and upwards are here reckoned by the dozen, and in some places streets and gardens follow in succession for days together. Here *Tarim*, capital of a petty state, lies 120 miles north of Makalla at the junction of the Rashiyeh and Kasr, which jointly form the Wady-Mossileh. *Shibam*, another capital, is situated in the Wady-Kasr Valley some 25 miles south-west of Tarim, and higher up the same valley is studded with several large towns, such as *Haura*, *Beda*, and *Amid*. Near *Meshed-Ali*, in the Haura district, stand the famous "forty tombs," sepulchral chambers covered with Hymiaritic inscriptions. In West Hadramaut the chief places are *Habban*, *Yeshbum* and *Nisab*, noted for its salt-mines, in the interior, and *Bir-Ali*, *Megdeha*, and *Shugra* on the coast.

Aden.—Sana.

The British town of *Aden*, now the most populous in Arabia, lies on an islet connected by a strip of sand with the mainland. Its admirable position at the foot of a natural fortress, easy of defence, near two deep and well-sheltered harbours, naturally attracted the attention of the English, who in 1839 purchased the place from the Sultan of Lahej for a pension of a few hundred dollars. Since then the small village has again become a flourishing city, like its predecessor, the ancient *Adana*, in the time of the Phœnicians and again before the discovery of the sea-route to India. At present it consists of two distinct quarters, the "Marina," or Steamer Point, near the west port, where the steamers touch, and where whole fleets might find good anchorage, and the city proper, on the slope of the Jebel-Shamshan, an extinct volcano overlooking the east port. The latter is sheltered by the islet of Sirah, now connected with the mainland, and fortifications recalling those of Gibraltar have been constructed in the very crater of the volcano. But the most remarkable monuments are the vast reservoirs excavated in the side of the hill and fed by an

aqueduct from the interior. These cisterns have a capacity of 40,000 tons, but are often dry, and then the city is supplied by distilled seawater. The Arabs, former masters of the district, are now in a minority in Aden, where the chief elements are Indians, both Banyas and Mussulmans, and Somalis from the opposite coast. In winter ten thousand of these Africans are settled in the place, which they furnish with sheep, suet, butter, timber, in return for woven goods and tobacco. In 1880 the exchanges amounted altogether to £2,200,000, of which £1,600,000 were imports and £600,000 exports. Some Jews, Parsis, and Europeans also reside in Aden, which depends administratively on the Bombay Presidency. With the territory of the surrounding Arab sultans, it forms a vital link in the vast chain of British strongholds encircling the globe. The district officially annexed to the colony includes the small oasis of Sheikh-Othman north of the peninsular. Close to the entrance of the Red Sea, over against the English island of Perim, lies the almost

Fig. 209.—Aden.

Scale 1 : 425,000.

circular islet of *Sheikh-Said,* which has been proposed as a quarantine station for pilgrims proceeding to Mecca.

Sana, capital of the Turkish vilayet of Yemen, and one of the largest cities in Arabia, stands at an altitude of no less than 7,100 feet above sea level, an altitude higher than that of any European town. Well laid out, with broad clean streets, public and private gardens open to the public, Sana contrasts favourably with the wealthiest cities in the East. Some of its edifices are also built in a fine style of architecture, combining the rich sculpture of the Rajputana monuments with the noble outlines of those of Florence. Some of its fifty mosques are of great size, and one of them rivals the Kaaba itself in sanctity even in the eyes of the orthodox Mussulmans of Yemen.

As a strategical position commanding the whole of south-west Arabia, and enjoying easy communication with several towns on the coast, Sana is much

CISTERNS OF ADEN.

better situated than was *Mareb* (*Mariaba*), the ancient Saba, metropolis of the Sabæans. This place was, so to say, re-discovered in 1843 by Arnaud, and it has recently been again visited by Halévy. It lies in the Jof depression, on a wady draining towards Hadramaut, but of its monuments little now remains except a circular enclosure and a ruined building locally known as the "Palace of Balkis," according to the legend residence of the Queen of Saba, Solomon's friend and ally. Numerous inscription found here and in the neighbouring ruins of *Medinet-en-Nebas*, or "City of Bronze," have enabled archæologists partly to recover the history and mythology of the Sabæans. West of Mareb are seen the remains of the stupendous dyke, which notwithstanding its enormous thickness (175 paces at the

Fig. 210.—Sana.

Scale 1 : 400,000.

base), was swept away by the floods early in the second century of the new era, thereby suddenly changing the destinies of the whole region, and reducing the Mareb district to a wilderness.

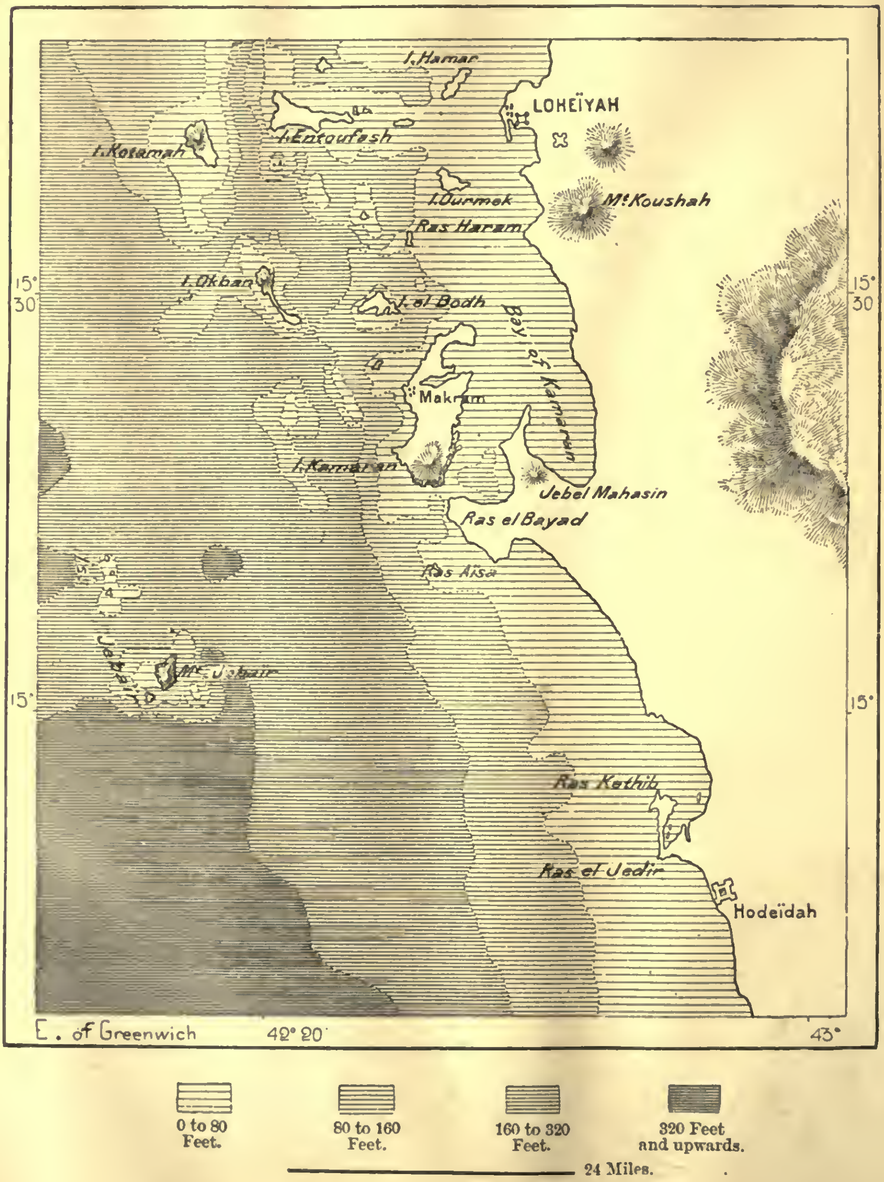
Moka, on the Red Sea, has lost the monopoly of the coffee trade, which has to a large extent been transferred to Aden. Within its enclosures there are at present more ruins than houses, while *Hodeidah*, lying farther north, has become a flourishing Turkish settlement, notwithstanding its unhealthy climate. It is the outport of Sana, *Manasha*, and the other large towns in Upper Yemen. *Ghalefka* and *Loheiyah* are also busy seaports. Owing to its malarious climate, *Mihail*, former capital of the Assir territory, has been abandoned in favour of *Epha*, standing on a spur of the main range 2,800 feet above the sea.

Mecca.

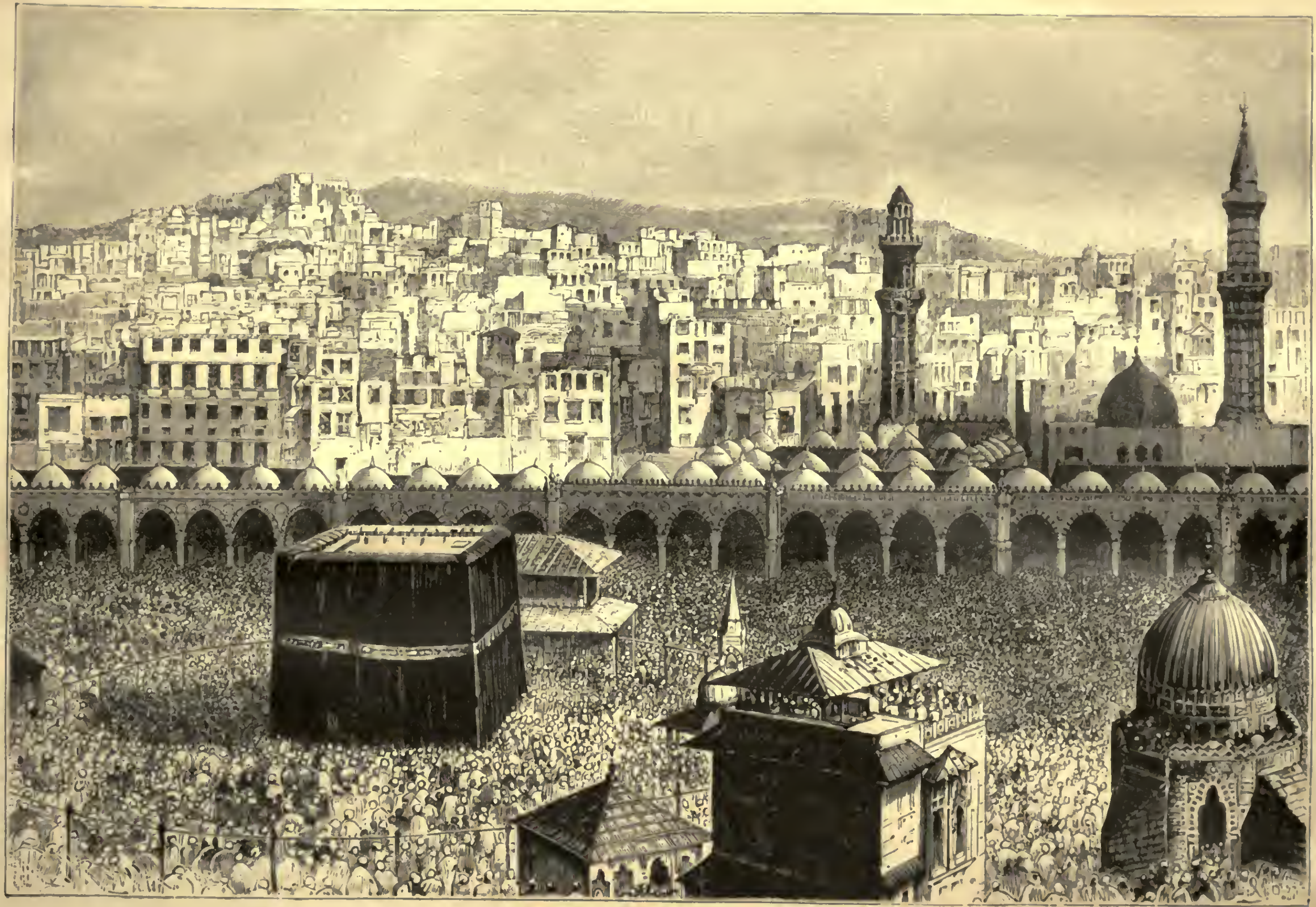
Mecca, the "holy city" for perhaps two hundred millions of human beings, towards which Mohammedans of all sects and nations turn in the hour of prayer, is a place

Fig. 211.—Hodeidah and Loheiyah.

Scale 1 : 1,000,000.



of small extent, with but few inhabitants except during the three months of pilgrimage following the fast of Ramadan. In spite of its inconvenient situation, it has become the capital of Arabia and metropolis of Islam, thanks to the "black stone" here venerated long before the appearance of the Prophet. It lies in the midst of



MECCA—COURT OF THE KAABA.

bare hills and sandy wastes, in a valley—or rather the bed of a dried up wady—with a slight southern fall. This watercourse is occasionally flooded by freshets, which in 1861 swept away one third of the city, which mostly follows the direction of the wady. But all the streets, spacious enough to admit the multitude of pilgrims, converge on the central square occupied by the Mesjid-el-Haram, or "Holy mosque."

This building, destitute of all beauty, is a mere aggregate of low structures with cupolas and minarets forming a sort of arcade along the side of an extensive inner court. In the centre of the court stands the Kaaba, or "Cube," a quadrangular block some 40 feet high with a silver door, through which the pilgrims are allowed access thrice a year. In the outer wall near the door is enframed the

Fig 212.—Mecca and Jeddah.

Scale 1 : 2,000,000.

famous black stone, an aerolite, the broken fragments of which are kept together by a silver hoop. This is the holy stone supposed to have been given by an angel to Ishmael, father of the Arabs, and which will one day be endowed with speech to bear witness in favour of all those by whom it has been kissed with pure lips. Above the building floats a black silk awning, the gift of the Turkish Sultan. At the four corners stand four shrines, belonging respectively to the four orthodox Sunnite sects, the Shafites of Syria and Mesopotamia; the Hanafites of Bokhara, Baluchistan, Afghanistan, and Turkey; the Malekites from Africa, and the Hanbalites, mostly of Arab stock. In one of the shrines flows the copious Zemzem, the sacred fountain which suddenly sprang up for Agar and Ishmael when they were wandering in the wilderness. Its somewhat brackish waters are believed to be

efficious against all evils, although when analysed by Frankland they were found to be thoroughly polluted by organic matter. During the season a throng of six thousand or eight thousand pilgrims is constantly assembled at the Kaaba from every part of the Moslem world. The total number of visitors varies greatly from year to year, according to the political state of the peninsular and surrounding lands. In the thirteenth century the last caravan of the Abassides consisted of 120,000 camels, and a whole army of troops, traders and attendants. During the Wahabite wars the pilgrimages were at times almost entirely interrupted; but since then the yearly average exceeds one hundred thousand devotees, mostly as zealous for their worldly as for their spiritual welfare. Hence during the season Mecca is changed into a vast bazaar, trade and barter invading the very precincts of the temple itself. Yet the "infidel" is still jealously excluded from the holy places, which during the present century have been visited only by Badia, Burckhardt, Maltzan, Burton, and one or two other Europeans.

Pilgrims cannot claim the title of "haji" unless they also visit the holy Mount Arafat, which lies some 20 miles to the north-east of Mecca. This granite eminence, which rises scarcely more than 200 feet above the surrounding plain, is probably indebted for its traditional sanctity to the perennial stream flowing from a fissure in the rock, and partly supplying Mecca with water. In 1882 as many as seventy thousand pilgrims visited this spot, where Adam is supposed to have received the first formula of prayer from the angels. But the whole district of Hedud-el-Haram, of which Mecca occupies the centre, is a holy land, stretching from the fortress of *Taif*, in the east, westwards to *Jeddah* on the Red Sea. As the port of debarkation for the great bulk of the pilgrims, of whom sixty thousand landed here in 1881, Jeddah has become the wealthiest place on the Red Sea. Its population, essentially of a cosmopolitan character, includes two thousand Indians, a large number of Nubians, some Chinese, Malays, and even Dayaks from Borneo. But all, depending for their existence on the piety of the haji, are naturally of a fanatical character. The trade of Jeddah averages about £5,000,000 yearly.

In the neighbourhood of Jeddah is the famous tomb of the Mother of Mankind, of which Captain Burton gives us the following characteristic description:—

"Outside the walls of Jeddah lies no less a personage than Sittna Hawwa, the mother of mankind.

"The boy Mohammed and I mounting asses one evening, issued through the Meccan gate, and turned towards the north-east, over a sandy plain. After half-an-hour's ride, amongst dirty huts and tattered coffee-hovels, we reached the *enceinte*, and found the door closed. Presently a man came running with might from the town; he was followed by two others; and it struck me at the time that they applied the key with peculiar *empressement*, and made inordinately low congees as we entered the enclosure of whitewashed walls.

"The Mother is supposed to lie, like a Moslemah, fronting the Kaaba, with her feet northwards, her head southwards, and her right cheek propped by her right hand. Whitewashed and conspicuous to the voyager and traveller from afar, is a diminutive dome, with an opening to the west; it is furnished as such places

usually are in El-Hejaz. Under it, and in the centre, is a square stone, planted upright, and fancifully carved, to represent the omphalic region of the human frame. This, as well as the dome, is called El-Surrah, or, the navel. The cicerone directed me to kiss this manner of hieroglyph, which I did, thinking the while that, under the circumstances, the salutation was quite uncalled-for.

"Having prayed here and at the head, where a few young trees grew, we walked along the side of the two parallel dwarf walls which define the outlines of the body. They are about six paces apart, and, between them, upon Eve's neck are two tombs, occupied, I was told, by Usman Pasha and his son, who repaired the Mother's sepulchre.

"I could not help remarking to the boy Mohammed that, if our first parent measured a hundred and twenty paces from head to waist, and eighty from waist to heel, she must have presented much the appearance of a duck. To this the youth replied flippantly, that he thanked his stars the Mother was underground, otherwise that men would lose their senses with fright."

Medina.—Riad.

Medinat-en-Nebi, that is, the "City of the Prophet," or simply *Medina*, the "City," in a superlative sense, is second to Mecca alone in sanctity. Although it does not confer the title of haji on those visiting it, "a prayer made in its mosque is worth a thousand elsewhere." As many as a hundred titles, replacing the old and ill-omened name of *Yatieb*, attest the high rank enjoyed by Medina amongst the cities of Arabia. Like Mecca, it occupies the centre of a Hedud-el-Haram, or sacred territory, about 120 square miles in extent, within which "crime is interdicted," where "it is unlawful to hunt or slay any animals except the infidel." Most of the pilgrims to Medina are Moghrabines, *i.e.* "Westerns," from Africa, who, besides the Prophet's tomb, come to venerate that of the Iman Malek-Ibn-Anes, founder of the Malakite sect, to which they nearly all belong.

Medina lies on the east slope of the border range between the Tehama and the central plateau, a little to the south of the famous Mount Ohod, which is one day to be removed to heaven, as the scene of the victory gained by Mohammed over his enemies. East and west rise some other crests, including that of Aira, where the Prophet almost perished of thirst, and which is consequently destined to be cast into hell. The surrounding plain is dotted over with clumps of palms wherever sufficient water can be obtained for irrigation purposes from the wells. Yet at this elevation of probably 3,000 feet the temperature is so low that, according to a saying attributed to Mohammed, "the man who can patiently endure the cold of Medina and the heat of Mecca deserves a reward in heaven." The city, which is much smaller than Mecca, forms an oval encircled by walls, with a strong citadel at their north-west extremity. West and south stretch extensive suburbs and gardens, which are often flooded by a wady flowing towards the south-west. In Medina there are no remarkable monuments, even the famous El-Haram mosque, which contains the tomb of the Prophet, being a very unpretending structure.

Here are also preserved the remains of Abu-Bekr, of Omar, and some other illustrious saints of Islam.

The port of Medina on the Red Sea is *Yambo*, commonly called *Yambwa-el-Bahr*, or "Yambo-on-Sea," to distinguish it from *Yambwa-el-Nakhl*, or "Yambo of the Palms," which lies in an oasis about 20 miles from the coast. North of this point the only seaport visited by shipping is *El-Wej*, which lies within the Egyptian frontier-line. North-west of the great Nefud, the Jof depression, which drains to

Fig. 213.—Medina.

Scale 1 : 13,000.

555 Yards.

the Wady-Sirhan, contains the fortified towns of *Jof* and *Meskakeh*, the latter a political dependence of the emir of North Nejed. *Hail*, residence of this potentate, stands about 3,500 feet above the sea in a valley enclosed on the north by the Jebel-Aja, or "Sapphire Mountains." Within the walls is a vast fortified palace, which with its annexes forms a distinct quarter of itself. Hail is the chief station of the Persian pilgrims, midway between the two cities of Nejef and Mecca.

In the Nejed proper, said by Palgrave to contain more large towns than any

other part of Arabia, the chief places are *Kefar*, in the Upper Kasim hills; *Rass*, in Lower Kasim; *Oneizah*, in the Wed-el-Ermek Valley, midway between the Red Sea and Persian Gulf; *Shakra*, capital of Woshem; *Deria* or *Derreyeh*, former capital of the Wahabites, and before its capture by the Egyptians in 1817 the largest city in the peninsular. *Riad*, the present capital, is a strongly fortified place, with massive walls flanked by lofty towers and commanded by a citadel, residence of the emir. *Manfuhah*, a few miles south of Riad, is nearly as large as the capital, and like it surrounded by extensive gardens and palm-groves. *Kharfah*, the chief place in the Aflaj district south-west of Riad, is a small town, half of whose inhabitants are negroes. *Kalat-el-Bisha*, *Soleyel*, and the other cities in the Wady-Dowasir and Kora districts, between the Wahabite State and Mecca, are known only by report. Kalat-el-Bisha, which lies on the eastern slope of the Assir range, appears to be a place of some importance.

Prospects of Arabia.—The Caliphate.—Ulema.—Sheikh-ul-Islam.—Beyond Hadramaut and the Mahra country stretch the still untrodden sands of the Dahna wilderness. This apparently uninhabited desert region constitutes, with the Red Sea coastlands, the true limits of Arabia properly so called. But even so defined, split up as it is into numerous petty states, and encroached upon from every quarter by foreign conquerors, the peninsular has long lost all prospects of political cohesion. It even lacks the social unity which in pre-Mohammedan times it enjoyed in virtue of the national games and the oral competitions for poetic honours, to which representatives from every tribe periodically flocked in large numbers. Except their rich and vigorous Semitic speech, which has almost completely absorbed the southern Hymiaritic dialects, the inhabitants of the peninsular have really very little in common. All are doubtless at least nominal Mohammedans. But the Bedouins are at heart still pagans, mainly worshippers of the "Day-god," like their forefathers before the appearance of the Prophet. Others, such as the Wahabites, differ greatly in their religious views and practices from the populations of Yemen and the "holy places," with whom they hold little intercourse. The traditions, usages, and aspirations of the settled and nomad elements are also divergent at many points. While the Bedouins of the steppe lands care for little except their pastures, domestic animals, and independence, the agricultural communities of Yemen and the other arable regions have acquired a taste for trade and the industries, and are willing to accept a foreign yoke in return for the advantages derived from mutual association. Hence these "dwellers in houses" are regarded with feelings of contempt by the free children of the desert, and these two great sections of the people really constitute two distinct nationalities, quite incapable of combining together in the common interests. A consolidated Arabia must therefore remain the dream of a few enthusiastic champions of the national rights, or a convenient pretext for agitation readily availed of by less disinterested politicians. With the power of England firmly planted along the southern seaboard, and that of the Turks encroaching from the

north and west, the divided Arab race has but faint prospects of achieving its political independence in our times.

It is also to be borne in mind that by her very religion Arabia, like all other Mohammedan countries, is condemned to a state of stagnation if not of actual retrogression. As Sir William Muir cogently remarks, "Some, indeed, dream of an Islam in the future, rationalised and regenerate. All this has been tried already and has miserably failed. The Koran has so incrusted the religion in a hard unyielding casement of ordinances and social laws, that if the shell be broken the life is gone. A rationalistic Islam would be Islam no longer. The contrast between our own faith and Islam is most remarkable. There are in our Scriptures living germs of truth, which accord with civil and religious liberty, and will expand with advancing civilisation. In Islam it is just the reverse. The Koran has no such teaching as with us has abolished polygamy, slavery, and arbitrary divorce, and has elevated woman to her proper place. As a reformer, Mohammed did advance his people to a certain point, but as a prophet he left them fixed immovably at that point for all time to come. The tree is of artificial planting Instead of containing within itself the germ of growth and adaptation to the various requirements of time and clime and circumstance, expanding with the genial sunshine and rain from heaven, it remains the same forced and stunted thing as when first planted some twelve centuries ago."*

Since that time the caliphate itself, that is, the spiritual headship of Islam, has passed from the Arab to the Osmanli Turk. As the successor and vicar of the Prophet on earth, the "caliph" now unites in the person of the sultan the sacredness of a pontiff with the authority of a temporal sovereign. The former quality, however, is recognised only by the Sunnis, one of the two great sects into which Mohammedanism is divided. The schismatic Shiahs, who include the Persians, a portion of the Kurds, the Syrian Metualis, and a few Indian Mussulmans, hold on the contrary that the succession expired with Hassan, the son of Ali, since whom Ommiades, Abbassides, Fahmites, and Ottomans have all alike been usurpers of the title.

Next in sacredness to the caliph ranks the sheriff of Mecca; but the veneration in which he is held by both Sunnis and Shiahs results from his descent from what may be called the Levitical tribe of the Koreish and his hereditary governorship of the holy city, rather than from any priestly character.

At a long remove in veneration below these two half-sacred chiefs of the faith come the Ulema, a body of doctors who expound the Koran and furnish both ministers to the mosques and dispensers of the law. The authority attaching to this great corps in the person of its chief, the Sheikh-ul-Islam, is the only check on the absolute despotism of the sovereign. The institution, which is perhaps the greatest obstacle to the regeneration of the Turkish empire, dates from the ninth century, when a special order of *ulemá*, or "learned men," was gradually developed specially devoted to the study and exposition of the Koran, commentaries and traditions of Islam. In course of time this privileged body naturally acquired

* "Rede Lecture," Cambridge, 1881.

great influence, and even arrogated to itself the attributes of a quasi-priesthood. Like the Western Christian clergy of the same period, they exercised an influence paramount in some respects to that of the sovereign himself. When the caliphs sank to the position of mere pontiffs, and the secular power passed into the hands of secular princes, the high prerogatives of the ulema were still respected, and more than once the grand mufti overawed the sultan himself. Submissive when the sovereign was strong, and dominant when he was weak, they managed to retain their influence through all the revolutions of Ottoman history, at every period of which they have been the constant enemies of reform. Hence it may be confidently anticipated that any attempts to introduce such administrative improvements as are contemplated by the late Anglo-Turkish Convention will be persistently opposed by this powerful body.*

* J. C. McCoan, "Our New Protectorate," ii. p. 173 *et seq.*

APPENDIX.

STATISTICAL TABLES.

WESTERN ASIA.

APPROXIMATE AREA AND POPULATION.

	Area in square miles	Population.
Asiatic Turkey, Samos, Cyprus	760,000	16,360,000
Arabia, Aden	1,000,000	3,725,000
Persia	660,000	7,655,000
Afghanistan, exclusive of Afghan Turkestan	255,000	4,200,000
Baluchistan	110,000	350,000
Total	2,785,000	32,290,000

AFGHANISTAN.

APPROXIMATE POPULATION ACCORDING TO RACES.

AFGHANS:—	
Durani	700,000
Ghilzai	400,000
Yusuf-Zai, Swati, and others in the north-east	600,000
Waziri, and others in the east	200,000
Kakars, and others in the south-east	200,000
Total	2,100,000
IRANIANS:—	
Tajiks and Parsivans	500,000
Kohistani	200,000
Sistani	50,000
Jemshidi and Firuz-Kuhi	50,000
Total	800,000
Siah Posh Kafirs	150,000
Chugani, Chitrali, Dards, &c.	300,000
Mongols { Hazarahs	300,000
Mongols { Taimuri and Kipchaks	300,000
Turks and Turkomans	100,000
Hindki, Kizil-Bashes, Kurds, Arabs, and others	150,000
Total	1,300,000
Grand Total	4,200,000

CHIEF TOWNS OF AFGHANISTAN AND DARDISTAN.

	Population.		Population.
AFGHANISTAN :—		Jalalabad	3,000
Kabul	75,000	Zerni	1,200
Kandahar	60,000	DARDISTAN :—	
Herat	50,000	Tall (Raverty)	7,500
Ghazni	8,000	Kalkot	7,500
Istalif	5,000	Chahil	5,000
Charikar	5,000	Tarrnah (Raverty) . . .	5,000
Kanijuram	5,000	Chitral (Biddulph) . . .	3,000
Makin	4,000		

ADMINISTRATIVE DIVISIONS.

Provinces.	Districts.
I. KABUL	Kabul; Upper Kabul and Logar Valleys; Daman-i-Koh. Ghorband; Upper Ghorband and Panjhir Valleys. Laghman: Kabul Valley between Kabul and Jalalabad. Safi and Tagao; Hindu-Kush Valleys between Daman-i-Koh and Kafiristan. Jalalabad; Lower Kabul Valley. Ghazni; Ghazni Basin and surrounding highlands.
II. KANDAHAR . .	Kandahar; East Durani territory. Kelat-i-Ghilzai; Tarnak Valley; Gul-koh. Ghirisk. Farah; Farah-rud Basin.
III. SISTAN	Lash; Shakansur.
IV. HERAT	Herat; Middle Heri-rud Basin. Kerrukh; Upper Heri-rud Basin. Obeh. Ghurian; Lower Heri-rud Basin. Sibzawar; Ardrashkan Basin. Shahband; Aimak territory.
V. HAZAREH TERRITORY .	
VI. KAFIRISTAN . . .	Mastuj; Kaskar or Chitral; Kunar; Bushkar. Panjkora; Dir; Bajaur.

DISTANCES.

	Miles.		Miles
Kabul to Herat	600	Kabul to Jalalabad	75
Herat to Meshhed	200	Kabul to Peshawar	165
Kandahar to Kabul	290	Sukkur to Sibi, by rail . . .	140
Kandahar to Herat	335	Sibi, by projected rail to Kandahar .	300
Kandahar to Sukkur . . .	410	Kandahar to Khoja Amran . .	90
Kabul to Ghazni	60	Dera Ismail Khan to Kandahar .	424

BALUCHISTAN.

Area	110 sq. miles	Population	350,000

CHIEF TOWNS.

	Population.		Population
Kalat	14,000	Bagh	3,000
Zerhi	10,000	Gwadar	2,500
Gandava	5,000	Khozdar	2,500
Bela	4,500	Ormara	2,000
Shal (Kwatah)	4,000	Sonmiani	1,500
Mastang	4,000		

ADMINISTRATIVE DIVISIONS.

Provinces.	Capitals.	Districts.
Shal	Kwatah (Quettah)	——
Kalat	Kalat	——
Kachi-Gandava	Gandava	——
Sarawan	Sarawan	Sarawan, Nushki, Kharan, Mushki.
Jhalawan	Khozdar	Khozdar, Sahrab, Wadd, Kolwah.
Las	Bela	——
Mekran	Gwadar	Mekran, Dasht, Kej, Panjgur.

PERSIA.

Area	660,000 sq. miles	Population	7,655,000

AREAS OF DRAINAGE.

	Square Miles.
To the Indian Ocean	150,000
To the Aral and Caspian	110,000
To Lake Sistan	50,000
To Lake Urmiah	20,000
To the Central Depressions	330,000
Total	660,000

CHIEF TOWNS.

	Population.
Khorassan and Sistan:—	
Meshed	80,000
Birjand	15,000
Kuchan	12,000
Sebzewar	12,000
Tebbes	10,000
Bajistan	10,000
Nishapur	9,000
Bujnurd	7,500
Sultanabad	5,000
Tun	5,000
Turbat-Sheikh-i Jami	4,000
Turbat-i-Haidari	4,000
Kakh	4,000
Kahka	3,000
Dehrud	3,000
Radkan	3,000
Khaf	2,500
Kaïn	2,500
Shirwan	2,500
Sarakhs	2,000
Sistan:—	
Nasirabad	6,000
Sekuha	5,000
Kalah-nau	4,000
Mazanderan:—	
Barfrush	30,000
Amol	10,000
Astrabad	8,000
Sari	8,000
Gumish-tepe	3,500
Ghilan:—	
Resht	27,000
Lahijan	8,000
Rudbar	5,000
Lengherud	3,000
Enzeli	2,500
Azerbeijan:—	
Tabriz	100,000
Khoi	35,000
Urmiah	25,000
Maragha	15,000
Ardebil	12,000
Binab	7,500
Tuj-bulak	6,000
Shehr-i-Mayandab	5,000
Maku	4,000
Marand	4.000
Ahar	3,500
Farsistan:—	
Shiraz	25,000
Abadeh	5,000
Kumisheh	4,000
Mekran:—	
Bampur	1,000
Irak-Ajemi:—	
Teheran	100,000
Kashan	70,000
Ispahan	60,000
Yezd	50,000
Kasvin	25,000
Zenjan	20,000
Kum	20,000
Burujird	20,000
Hamadan	15,000
Kupa	15,000
Nejefabad	15,000
Khonsar	14,000
Damghan	13,000
Semnan	12,500

Chief Towns—*continued.*

	Population.
Ardakan	10,000
Shahrud	8,000
Gulpaigan	8,000
Bostam	8 000
Naïn	5,000
Maibut	5,000
Taft	5.000
Kirman:—	
Kirman	41,000
Bahramabad	10,000
Saidabad	8,000
Rayin	6,000
Mahun	5,000
Nehavend	5,000
Bam	2,500
Ardilan:—	
Kermanshah	30,000
Senna	8,000
Kirind	6,000
Bana	3,000
Luristan:—	
Khorramabad	5,000
Khuzistan:—	
Dizful	25,000
Mohammerah	10,000
Shuster	8,000
Bebehan	4,500

RELIGIONS OF PERSIA.

Shiah Mohammedans	6,860,000
Sunnite Mohammedans	700,000
Armenians	43,000
Nestorians	23,000
Jews	19,000
Guebres (Parsis)	8,000

REVENUE.

Income	£2,350,000
Expenditure	£2,200,000
Debt	Nil.

TRADE.

Average Imports	£2,750,000
Average Exports	£1,800,000

DISTANCES.

	Miles.
Teheran to Kum	87
Kum to Ispahan	158
Ispahan to Yezd	191
Yezd to Kirman	219
Kirman to Bam	136
Bam to Bampur	242
Bampur to Gwadar	220
Bushahr to Shiraz	120
Teheran to Resht	180
Tabriz to Teheran	360
Meshed to Teheran	558
Meshed to Sistan	582
Sistan to Kirman	360
Sistan to Bam	246
Bam to Bandar Abbas	248
Shiraz to Ispahan	220

ADMINISTRATIVE DIVISIONS.

Provinces.	Governments.	Capitals.	Population.
Azerbeijan	Azerbeijan	Tabriz	1,400,000
Irak-Ajemi	Khamseh	Zenjan	1,320,000
	Kasvin	Kasvin	
	Teheran	Teheran	
	Hamadan	Hamadan	
	Kum	Kum	
	Kashan	Kashan	
	Ispahan	Ispahan	
	Yezd	Yezd	
Kurdistan	Ardilan	Senna	260,000
	Kermanshah	Kermanshah	
Luristan	Burujird	Burujird	300,000
Farsistan	Shiraz	Shiraz	1,200,000
Khuzistan	Shuster	Shuster	600,000
Kirman	Kirman	Kirman	600,000
Malair Tursikan	Bampur	Bampur	100,000
Ghilan	Ghilan	Resht	400,000
Mazanderan	Mazanderan	Sari	250,000
Astrabad	Astrabad	Astrabad	150,000
Khorassan	Khorassan	Meshed	1,000,000

ASIATIC TURKEY.

Area . . .	760,000 sq. miles	Population . . .	16,360,000

POPULATION OF TURKISH ARMENIA.

Turks and Turkomans . .	800,000	Lazes	100,000
Armenians	600,000	Cherkesses	50,000
Kurds	450 000	Sundries	70,000

POPULATION OF MESOPOTAMIA.

Vilayet of Dirbekr	818,000
Sanjak of Orfa	56,000
Sanjak of Zor (Do'r)	240,000
Vilayet of Bagdad	3,210,000
Vilayet of Bassora	790,000
Total	5,114,000

ASIA MINOR.

Area . . .	192,000 sq. miles	Population . . .	6,000,000

SYRIA AND PALESTINE.

Area . . .	73,000 sq. miles	Population . . .	1,450,000

ADMINISTRATIVE DIVISIONS.

Vilayets and Mutaserifliks.		Sanjaks.	Approximate Population.
ARMENIA AND PONTUS	Trebizond	Trebizond	250,000
		Janik	260,000
		Gumish-Kaneh	80,000
		Lazistan	200,000
	Erzerum	Erzerum	260,000
		Erzinjan	120,000
		Bayazid	30,000
		Baiburt	50,000
	Van	Van	25,000
		Mush	15,000
		Hakkari	80,000
	Kharput	Mamuret el-Aziz	220,000
		Argana	80,000
KURDISTAN	Diarbekir	Diarbekir	65,000
		Mardin	25,000
		Sert	15,000
		Malatia	45,000
	Mossul	Mossul	290,000
		Shehr-zor	250,000
		Suleimanieh	250,000
MESOPOTAMIA	Bagdad	Bagdad	460,000
		Amara, Kerbela, Hilleh	140,000
	Bassora	Bassora	13,000
		Montefik	660,000
		Nejed (Hasa)	65,000

ADMINISTRATIVE DIVISIONS—*continued.*

Vilayets and Mutaserifliks.		Sanjaks.	Approximate Population.
ANATOLIA	Sivas	Sivas	420,000
		Amasia	2[illegible]0,000
		Shebin-Kara-Hissar	190,000
	Kastamuni	Kastamuni	330,000
		Boh	260,000
		Sinope	110,000
		Changri	140,000
	Angora	Angora	200,000
		Yuzgat	190,000
		Kaisarieh	130,000
		Kir Shehr	45,000
	Hudavendighiar	Brussa	270,000
		Karassi	210,000
		Afium-Kara-Hissar	200,000
		Kiutayeh	250,000
	Aidin	Smyrna	310,000
		Aidin	250,000
		Sarukhan	230,000
		Mentesh	80,000
	Ak Dizin (Archipelago)	Mitylini	90,000
		Chio	40,000
		Kos	45,000
		Rhodes	130,000
	Konieh	Konieh	290,000
		Tekke	170,000
		Hamid	100,000
		Nigdeh	200,000
		Buldur	80,000
	Adana	Adana	140,000
		Kozan	65,000
		Ichil	90,000
		Bayas	20,000
SYRIA	Aleppo	Aleppo	260,000
		Marash	160,000
		Orfa	80,000
		Zhor	140,000
	Damascus	Damascus	—
		Beirut	—
		Hamah	—
		Akka	—
		Belkaa	—
		Hauran	—
		Tripoli	—
	Libanon		220,000
	Kuds (Palestine)	Jerusalem	240,000
ARABIA	Hejaz	Mecca	650,000
		Medina	
	Yemen	Sana	190,000
		Hodeidah	130,000
		Assir	160,000
		Taiz	50,000

CHIEF TOWNS.

	Population.
ARMENIA AND PONTUS:—	
Arabkir	35,000
Trebizond	32,000
Van	30,000
Kharput	25,000
Erzerum	20,000
Mush	15,000
Erzinjan	15,000
Baiburt	10,000
Eghin	8,500
Divrighi	8,000
Palu	7,500
Chemesh-Gadzak	4,000
Kerasond	4,000
Arghana	3,500
Tireboli	3,000
Gumish-Kaneh	3,000
Platana	2,500
Rizeh	2,500
Kyeban-Maden	2,500
Bayazid	2,000
TIGRIS BASIN:—	
Bagdad	80,000
Mossul	50,000
Diarbekir	40,000
Bitlis	15,000

CHIEF TOWNS—*continued.*

	Population.
Kerkuk	12,000
Suleimanieh	10,000
Revandoz	10,000
Kut-el-Amarah	10,000
Gadhim	8,000
Arbil	6,000
Mendeli	6,000
Sert	5,000
Tuz-Kurmatli	5,000
Khanakin	5,000
Kifri	4,500
Maden-Khapur	4,000
Khoi-Sanjak	4,000
Jezireh	3,500
Tell-Afar	3,000
Bakuba	3,000
Arghana	3,000
Akra	3,000
Altin-Kiopru	2,000
Tekrit	2,000

EUPHRATES BASIN BELOW THE KARA-SU-CONFLUENCE:—

	Population.
Orfa	50,000
Aintab	20,000
Bassora	20,000
Mardin	20,000
Asbuzu	20,000
Birejik	15,000
Hilleh	15,000
Kerbelah	15,000
Behesni	12,000
Nejef	12,000
Gurun	9,000
Divanieh	6 000
Suverek	6,000
Deir	5,500
Derendah	5 000
Mayadim	5,000
Mosseib	4,500
Anah	4,000
Nazrieh	4.000
Tuerij (Hindieh)	3,500
Midyat	3 000
Hit	2,000

NORTH ANATOLIA:—

	Population.
Kaisarieh	60,000
Afium-Kara-Hissar	42,000
Angora	38,000
Kiutayeh	37,000
Sivas	35,000
Tokat	30,000
Amasia	25,000
Zafaran-Boli	25.000
Kastamuni	20,000
Nev-Shehr	20 000
Changri	19,000
Zilleh	15,000
Yuzgat	15,000
Eski Shehr	13,000
Iskelib	13,000
Shabin-Kara-Hissar	12,500
Boli	12,000
Sevri-Hissar	11,500
Samsun	10,000
Mersivan	10,000
Tozia	10,000
Chorum	10,000
Ada-bazar	10,000
Bilahjik	10,000
Sinope	9,000
Urgub	7,500
Bafra	5,500
Niksar	5,000
Vizir-Kopri	5,000
Mondurlu	5,000
Injeh-su	4,500
Tash-Kopri	4,500
Charshamba	3,500
Kara-Hissar	3,500
Turkhal	3,500
Kir-Shehr	3,500
Ak-Serai	3,300
Majur Ineboli	3,000
Kalehjik	3,000
Bartan	2,500
Erekli	2,000

THE STRAITS AND SEA OF MARMORA:—

	Population.
Scutari	35,000
Balikesri	12,000
Kaleh-Sultanieh	9,000
Manyas	7.500
Ghemlik	6.500
Panormos	6 000
Erdek (Artaké)	6,000
Bigha	6,000
Bagadich	5,000
Ismid (Nicomedia)	3,000
Abullion (Apolonia)	2.700
Mudania	2,000
Kum-Kaleh	2,000

WEST ANATOLIA:—

	Population.
Smyrna	192,000
Manissa (Magnesia)	50,000
Cydonia	35,000
Aidin	32,000
Kirkagach	20,000
Ak-Hissar	20,000
Chesmeh	16,000
Pergamus	16 000
Alashehr (Philadelphia)	15.000
Ushak	15,000
Thyra	15,000
Latzata	14,000
Kassaba	12,000
Mughla	11,000
Burnabat	10,000
Vurlah	10,000
Soma	10 000
Gördiz	10,000
Nazli	10,000
Denizli	10.000
Kula	9,000

CHIEF TOWNS—*continued.*

	Population.
Edremid	8,000
Baindir	8,000
Œdemish	8,000
Buladan	8,000
Yenije-Fokia	8,000
Ghediz	7,500
Fokia	7,000
Menemen	7,000
Scala Nova	7,000
Sokia	7,000
Sighajik	5,000
Sovri-Hissar	4,000
Dikeli	4,000
Kadi-Koi	4,000

ARCHIPELAGO:—

	Population of Islands.
Tenedos	7,000
Mytilini	60,000
Chio	70,000
Ipsara	6,000
Samos	40,000
Ikaria	7,000
Patmos	3,000
Leros	3,000
Kalymnos	16,000
Kos	25,000
Nisyros	2,500
Symi	7,000
Telos	1,000
Rhodes	27,000
Karpathos	5,000
Kasos	5,000

ARCHIPELAGO:—

	Population of Chief Towns.
Chio	26,000
Mytilini	20,000
Kalymnos	15,000
Kos	11,000
Rhodes	11,000
Samos	7,000
Symi	7,000
Tenedos	3,000
Ikaria	1,000
Telos	600

SOUTH ANATOLIA:—

	Population.
Adana	45,000
Konieh	40,000
Isbarta	30,000
Marash	24,000
Adalia	13,000
Buldur	12,500
Tarsus	12,000

	Population.
Elmalu	10,000
Hajin	10,000
Karaman	7,500
Niddeh	6,000
Mersina	6,000
Egherdir	5,000
Sis	5,000
Eregli	5,000
Zilleh	4,000
Albistan	3,000

NORTH SYRIA:—

Aleppo	64,000
Hamah	40,000
Homs (Emessa)	30,000
Antiochia	22,000
Edlip	20,000
Latakieh	14,000
Alexandretta	10,000
Killis	9,000
Riha	3,000
Ruad	2,500

SOUTH SYRIA AND LIBANON:—

Damascus	170,000
Beirut	80,000
Tripoli	24,000
Zahlet	13,000
Sidon	9,500
Deir-el-Kamar	8,000
Jebail	8,000
Tyre	5,000
Baalbek	4,500
Es-Salt	4,000
Beharreh	3,000
Kerak	3,000
Batrun	2,000

PALESTINE:—

Jerusalem	30,000
Gaza	18,000
Hebron	17,500
Naplus (Sichem)	13,000
Jaffa	12,000
Nazareth	8,000
Safed	8 000
Khaifa	6,000
Bethlehem	5,500
Akka (Acre)	5,000
Hasbeya	4,000
Ludd	4,000
Tiberias	3,500
Ramleh	3,500
Jenin	3,000
Rasheya	3,000

POPULATION OF SYRIA AND PALESTINE ACCORDING TO RELIGIONS.

Mussulmans	Sunnites	650,000
	Metuali	40,000
Druzes		120,000
Ansarieh		150,000
Orthodox Greeks		100 000

Population of Syria and Palestine according to Religions—*continued.*

Latin Catholics	Maronites	200,000
	Melkites	80,000
	United Syrians and others	40,000
Armenians		20,000
Jews and Samaritans		40,000
Protestants		10,000

PRINCIPALITY OF SAMOS.

Area	213 sq. miles	Population	40,000

REVENUE.

Income	£120,000	Expenditure	£117,000

AGRICULTURAL RETURNS.

Land under crops	16,000 acres	Vineyards	7,300 acres
Olive Groves	13,000 ,,	Orchards	980 ,,

CYPRUS.

Area	3,670 sq. miles	Population (1881)	235,540

ADMINISTRATIVE DIVISIONS.

Provinces.	Districts.	Provinces	Districts.
Levkosia	Levkosia, Orini, Kythræa	Papho	Papho, Avdimu, Kilani, Kuklia, Khrysoko
Larnaka	Larnaka	Kerynia	Kerynia, Morfu, Levka
Limisso	Limisso, Episcopi		
Famagosta	Famagosta, Mesorea, Karpaso		

CHIEF TOWNS.

Population (1881)	
Levkosia (Nikosia)	11,555
Larnaka	7,827
Limassol	5,994
Morfu	3,000

ARABIA.

Area	1,000,000 sq. miles	Population	3,725,000

ADMINISTRATIVE DIVISIONS.

Independent Arabia.

States or Regions.	Tribes or Provinces.	Probable Population.
El-Hamad (Syrian Desert)	Anazeh	120,000
	Roala	300,000
	Shammar	112,000
	Other groups	100,000
Jebel-Shammar	Wed-Jof	12,000
	Kheibar	25 000
	Teima	12,000
	Jebel-Shammar	162,000
	Upper Kasim	35,000

ADMINISTRATIVE DIVISIONS—*continued.*

States or Regions.	Tribes or Provinces.	Probable Population.
NEJED	Lower Kasim	30,000
	Woshem	30,000
	Sedeir	50,000
	Ared	15,000
	Aflaj	25,000
	Harik	20,000
	Wed Dowasir	20,000
	Kora	5,000
KOVEIT	Koveit	30,000
OMAN	Katar	100,000
	Sharjah	80,000
	Rus-el-Jebel	25,000
	Dahirah	30,000
	Batnah	65,000
	Jebel-Akhdar	400,000
	Mascat	100,000
	Sur	70,000
	Jailan	90,000
	South Coast	10,000
HADRAMAUT	Mahra	40,000
	Hadramaut	300,000
	Beled-Beni-Issa	150,000
	Beled-el-Hajar	100,000
	Beled-el-Jof	60,000
	Beled-Yafya	100,000
	Nejran	50,000

TURKISH ARABIA.

El-Hasa	250,000
Bahrein	75,000
Yemen	380,000
Assir	165,000
Hejaz	240,000
Madian	20,000

BRITISH ARABIA.

Aden	35,200
Vassal States	35,000

CHIEF TOWNS.

Mecca	45,000	Yeshbum	10 000
Menamah	40,000	Mobarek	10,000
Aden	35,000	Amran	10,000
Mascat	30,000	Loheiyah	10,000
Sana	28,500	Kafar	8,000
Hofhof	25,000	Kharfah	8,000
Riad	25,000	Haura	8,000
Oneizah	20,000	Taif	8,000
Manfuhah	20,000	Menasha	8 000
Koveit	20,000	Yambo	7 500
Terini	20,000	Makalla	7,000
Shibani	20,000	El-Katif	6,000
Joddah	17,000	Lahej	5,000
Medina	16,000	Moka	5,000
Hail	15,000	Hodeidah	5,000
Bereidah	15,000	Rass	3,000
Shakrah	15,000	Habban	3,000
Mubarrez	15,000	Kheibar	2,500
Toweim	14,000	Nisab	2,000
Mejmaa	12,000	Teima	1,500
Mattrah	10,000		

APPROXIMATE POPULATION OF ASIATIC TURKEY AND ARABIA ACCORDING TO RACES AND RELIGIONS.

MOHAMMEDANS	Turks	10,000,000
	Arabs	4,000,000
	Syrians	600,000
	Kurds	1,300,000
	Circassians and Abkhasians	400,000
	Yuruk Turkomans	210,000
	Lazis	200,000
	Metuali	40,000
CHRISTIANS	Greeks	2,000,000
	Syrians	100,000
	Armenians	600,000
	Maronites	200,000
	Nestorians	200,000
SUNDRIES	Druses	120,000
	Ansarieh	150,000
	Jews and Samaritans	100,000
	Kizil-Bash	50,000
	Yezides	10,000
	Ishmaelites	5,000
	Protestants	25,000
	Total	20,810,000

INDEX.

Ababdeh, 140
Abdali, 36
Ab-Istada, Lake, 28
Abolonta, Lake, 266
Abu-Bekr, 482
Abullion, 312
Abu-Mohammed, 215
Abydos, 313
Ada-bazar, 305
Adalia, 340
Adana, 341
Adana (Arabia), 475
Aden, 438, 475
Adhim, River, 200
Adonis, River, 369
Adwan, 376
Ægean Sea, 254, 255
Afghanistan, 16
Afghans, 33
Afium-Kara-Hissar, 302
Aflaj, 482
Afshar, Persia, 109
  Cappadocia, 291
Agach-deniz, 280
Agdah, 140
Aghadeh, 238
Aghir, 472
Aghlasan, 340
Ahar, 131
Ahwaz, 95, 151
Aidin-Guzel-Hissar, 332
Aidinjik, 312
Aimaks, 45
Ain-el-Huderah, 364
Ain-es-Sultan, 412
Ain-Musa, 374
Aintab, 231
Aira, 481
Aivali, 316
Akabah, 428
  Gulf of, 433, 457
Ak-dagh, Lycia, 252
  Mysia, 260
  Cappadocia, 262
Ak-deniz, 368
Ak-Hissar, 321
Akhlat, 190
Akin, 184
Akir, 472
Akis-chai, 272
Akka, 413
Akma-dagh, 356
Akra Bay, 362
Akrotiri, 340
Ak-serai, 21, 302
Ak-su, 270, 274, 276
Aktamar, 191
Ala-dagh, Armenia, 166
  Bithynia, 262
  Cilicia, 247
Alaman-dagh, 257
Alamut, 86
Ala-Shehr, 321
Albistan, 343
Aleppo, 382
Alexandretta, 353, 382
Alexandria, Troas, 315
Ali-abad, 125
Ali-dagh, 81, 250
Alijuk, Mount, 91
Altin-Kiopru, 225
Amadia, 224
Amanus Mountains, 356
Amasia, 295
Amathos, 351
Amid, 218
Amid (Arabia) 475
Amida, 218
Amman, 407
Amul, 125
Amran, 235
Amrit, 390
Anadoli-Kavak, 306
Anah, 209, 235
Anamur 252
Anardereh, 53
Anatolia, 241
Anazeh tribe, 211
Angora, 303
Anjuman, 21
Ansarieh, 377
Ansarieh Mountains, 356
Antakieh, 385
Antaradus, 390
Anti-Caucasus, 166
Anti-Libanon, 359
Antiochia, 385
Antiphellus, 339
Anti-Taurus, 246, 247
Apamea, 368
Aphrodisias, 332
Apollonia, 266, 312
  Lake, 266
Arabah Depression, 364
Arabia, 430
Arabia Petræa, 364
Arabia Felix, 430, 438
Arabkir, 188
Arabs, 111, 376, 469
Arad, 390
Arafat, Mount, 465, 480
Ararat, 163
Arbil, 225
Ardakan, 140
Ardebil, 131
Arjish, 168
  Mount, 249, 250
Aret, 42
Argand-ab, 28
Argæus, Mount, 250
Arghana, 218
Arghesan, River, 28
Arish, 373
Armenia, 163
Armenians, 171, 173
Arnub, Mount, 435
Arzen, 183
Ashkinazim, 381
Ashref, 124
Ashur-adeh, 77, 88
Ashtola, 73
Asia Minor, 241
Asin-Kalek, 335
Askalon, 426
Askhabad, 80
Assir, 436, 437
Assur, 226
Assyrians, 214
Astrabad, 123
  Gulf of, 88
Athieno, 349
Atina, 180
Atrek, River, 81
Attabi, 473
Attairos, Mount, 255
Avlan-Oghlu Lake, 276
Ayash 305
Ayasmat, 316
Aya-suluk, 329
Azbuzu, 230

Baalbek, 399
Baba-dagh, 255
Baba-Gurgur, 186, 202
Babahan, 145
Baba-Kaleh, 267, 316
Babel, 2
Bab-el-Mandeb, 433, 453, 457
Babi, 116
Babil, 235
Babylon, 235
Babylonia, 194
Bafa, 352
Bafra, 300
Bagdad, 227
  Vilayet, 208
Baghabad, 141
Bagram, 47

Bagrami, 49
Bahramabad, 141
Bahrein Island, 453
Bahr-el-Huleh, 372
Bahr-el-Safi, 450
Baiburt, 182
Baindir, 329
Bajistan, 122
Bakhtyari, 110
Bakyr-chai, 268
Bakuba, 229
Bala-Hissar, 48, 303
Balikesri, 312
Balik-göl, 167
Balis, 234
Bal-kiz, 231
Balkis, 477
Baluches, 66, 111
Baluchistan, 59
Bam, 142
Bambyce, 232
Bamian, 16
Bamushir, 151
Bampur, 142
Bana, 146
Banas-chai, 270
Bandar-Abbas, 142
Bandar-Nakhl, 144
Bandar-Busaitin, 144
Bandar-Kougun, 144
Band-Emir, 100, 139
Band-i-Kir, 151
Banias, 409
Banyas, 476
Barada, River, 367
Barduram, 37
Barfrush, 125
Barka, 474
Baroghil, 20
Bartan, 301
Basiduh, 144
Bassora, 240
Batman-su, 219
Batna, 441
Batnah, 474
Batrun, 394
Battar, 215
Bayazid, 185
Beda, 475
Bedouins, 376, 468
Bea-Sebah, 423
Behesni, 231
Behistun, 147
Bei-bazar, 305
Bei-dagh, 252
Beilan, 382
Beilan Pass, 356
Beiler-bey, 308
Beirut, 394
Beisan, 411
Bei-shehr, 340
Beishehr-göl, 274
Beit-el-Ma, 386
Bekaa, 358
Bela, 72
Beni-Abu-Ali, 475
Beni-Laam, 215
Beni-Sakhr, 376
Beni-Sufyan, Mount, 437
Berut Mountains, 247
Bethlehem, 422
Besh-Parmak, 256
Bheddin, 396
Bigha, 313
Bilehjik, 305
Bimbogha-dagh, 246
Binalud Mountains, 122
Bin-bir-Tepe, 322
Bingöl-dagh, 163
Bir-Ali, 475
Bir, or Birejik, 202, 231
Birjand, 122
Bireimah, 475
Birs-Nimrud, 237
Bisutun, 147
Bithynium, 301
Bitlis, 219
River, 219
Black Sea, 170, 171, 266
Bogadich, 312
Boghaz-Koi, 299
Bolan Pass, 61
Boli, 301
Bosphorus, 305
Bosra, 406
Bostan, 343
Botan-su, 199
Botrys, 394
Boz-burun, 252, 261
Boz-dagh, 255
Brahui, 66
Brahui Mountains, 60, 61, 65
Brussa, 311
Budrun, 404
Budrun, 335
Bujnurd, 123
Buldur, Lake, 274
Polydorion, 340
Bulgar-dagh, 248
Bulgar-maden, 249
Bulvadin, 302
Bunarbashi, 267, 325
Burnabat, 325
Burujird, 150
Bushir, 145
Butman Mountains, 197
Buyuk-Mendereh, 270
Byblos, 394

Cadmus, 255
Cæsarea, 298, 409
Calash, 222
Callirhoe, 407
Camilla, 257
Campos, 327
Canaan, 353
Carmel, Mount, 362
Caryanda, 335
Caspian, 77
Cassaba, 322
Castellorizzo Island, 254
Castro, 318, 327
Cataractes River, 274
Cavaliere Point, 252
Cayster River, 269, 328
Cerines Mountains, 347
Chahil, 46
Chalap-dalan, Mount, 23
Chaldæa, 1
Chaldæans, 180, 215
Chalchanlyan, 82
Chalybes, 294
Chaman, 52
Chandarlik, 319
Gulf, 319
Changli, 330
Changri, 300
Charikar, 47
Charshamba, 297
Chekid-su, 247
Chekiyeh, 311
Chelidan Isles, 254
Chemesh-gadzak, 188
Chengel-koi, 308
Cherkesses, 286, 292
Chesmeh, 22, 327
Chesmeh-i-Ali, 82
Chimæra, 254
Chinese, 480
Chinghil Mount, 163
Chio, 257, 327
Chitlal, 47
Chitral, 20, 26, 47
Choruk River, 164, 270
Chorum, 71, 297
Chrysorhoes River, 368
Chugani, 42, 286
Chukur-ova, 278
Churuk su, 274
Cilicia, 247
Cilician Gates, 248
Claros, 327
Clazomenes, 326
Cnidus, 335
Cœle-Syria, 356, 358
Colophon, 327
Colossus, 332
Comana, 295
Constantinople, 304, 305
Cos, *see* Kos,
Ctesiphon, 229
Cydnus, 276
Cydonia, 316
Cyprus, 345
Cypriots, 348
Cyzicus, 261, 312

Dadur, 71
Dahna, 449
Dali, 349
Daman-i-Koh, 22, 79
Damascus, 400
Damghan, 118, 126
Dan, 371
Dana, 385
Dara, 234
Darab, 144
Darabjerd, 139
Dara-Nur, 43
Darbish, Mount, 92
Dardanus, 313
Dardanelles, 313
Dards, 46
Dariacha, Lake, 97
Dasht River, 64
Dasht-i-Bedaulat, 61
Dasht-i-Naummed, 94
Davri, 246
Dayaks, 480
Dead Sea, 372
Dehvar or Dekkan, 67
Deibir, 469
Deir, 235
Deir-el-Kamar, 396
Demavend, Mount, 1, 83
Demirji-dagh, 260
Denizli 332
Derat, 406
Dereghez, 80, 120
Derendah, 230
Derreyeh, 472, 482
Deria, 482
Dhafar, 475
Dhiban, 408
Diarbekir, 218
Dibbagh, Mount, 435
Dihi-Seif, 94
Dihkeran, 98
Dijleh River, 199, 200
Dikeli, 319
Dineir, 331

Disan Island, 460
Divanieh, 239
Divrig, 184
Diyadin, 185
Diyalah, 146, 200
Dizful, 150
River, 95
Dofar, 475
Dora, 20
Druzes, 377
Durani, 37

Ebal, Mount, 362
Ecbatana, 132
Edessa, 233
Edlip, 385
Edrei, 406
Edremid, 260, 316
Egherdir, 340
Egherdir, Lake, 274
Eghin, 184
Ekhliar-Eddin, 53
Elath, 428
El-Barah, 385
El-Batinah, 474
El-Belka, 363
Elburz, Mount, 82
El-Fijeh, Lake, 308
El-Gaah, 366
El-Haram, 481
El-Hadhr, 226
El-Hasa, 472
El-Kadder, 239
El-Katif, 472
El-Khalil, 423
El-Kosh, 224
Elma-dagh, 262
El-Marj, 394
Elmalu, 340
El-Mina, 392
El-Uz, 202
Elvend, Mount, 91
El-Wej, 204, 482
Emessa, 383
Emir-dagh, 252
Emmaus, 411
Enguri-su, 303
Enzeli, 125
Epha, 477
Ephesus, 329
Erbil, 225
Erchek, 190
Erchek, Lake, 169
Eregli, 341
Lake, 276
Erehk, 238
Erekli, 301
Eren-Koi, 267, 314
Ermerek-su, 276
Er-Rumen, 204
Ertesh, 190
Erzenjan, 184
Erzerum, 182
Esdraelon, 361
Esh-Shugr, 390
Eskishehr, 188, 305
Es-Salt, 407
Euphrates, 201
Euromus, 335
Eurymedon, 276
Evek-Varek, 182
Everek, 299

Fajra, 474
Falisa, 295
Famagusta, 347, 350
Fao, 240, 472
Farah, 52
Farah-abad, 125
Farah-rud, 28
Fars, Farsistan, 104
Farkein, 218
Feili, 110
Felujah, 235
Filias River, 301
Firuzabad, 145
Firuz-kuh, 46
Firuz-kuhi, 46
Fokia, 319
Forg, 144
Fulj, 448

Gadhim, 229
Galatians, 284
Galilee, 360
Galilee, Sea, 372
Gambrun, 142
Gandamak, 24
Gandava, 25, 59
Garghish Mount, 92
Garin, 183
Garizim, 415
Mount, 414
Gaugamela, 225
Gaz, 123
Gaza, 426
Geira, 332
Genezareth, Lake, 372
Germsil, 29
Germsir, 465
Ghadim, 218
Ghalefka, 477
Ghazni, 17, 49
River, 28
Ghediz, 320
Ghediz-chai, 268
Ghemlik, 261, 309, 311
Ghenjaver, 116
Ghermili River, 241
Ghiaur-dagh, 164, 247, 356
Ghilan, 86
Ghilzai, 37
Ghirisk, 52
Ghor, 362, 370
Ghurian, 55
Gilboa, 362
Giöl-bachi, 339
God-i-Zirreh, 29
Gök-kuh, 251
Gök-su, 276
Gomorrha, 373
Gomul, 25, 28
Gördiz, 321
Grambusa, 254
Great Zab River, 199
Granicus River, 266
Great Pamir, 16
Greeks, 289, 290
Guebrs, 104, 412
Gulhek, 129
Gul-koh, 26
Gulpaighan, 134
Gumish-dagh, 257
Gumish-kaneh, 165, 182
Gumish-tepe, 123
Gur, 23
Guriah Island, 459
Gurgur, 186, 202
Gurned, 417
Gurun, 230
Gwadar, 62, 73
Gyges, Lake, 322

Habban, 475
Habir, 444
Hadd River, 200
Hadidha, 203
Hadramaut, 432, 439
Haikans, *see* Armenians.
Hail, 482
Hajar, 439
Hakkiari Mountains, 167
Hala Mountains, 61
Halicarnassus, 335
Halys River, 263
Hamad, 446
Hamadan, 132
Hamah, 384
Hamath, 351
Hamman Suleiman, 411
Hamun, 29
Hanafites, 479
Hanbalites, 479
Hanish Isles, 457, 460
Hauran, 359, 443
Harb, Mount, 435
Harra, 360, 435, 443
Harran, 234
Hasa, 472
Hasani Isle, 460
Hasbeya, 409
Hassan-dagh, 249, 260
Hassan-Kaleh, 184
Hasser-chai, 240
Hattin, 411
Haura, 475
Hazar-jar Mountains, 82
Hazar-Masjid, 80
Hebron, 423
Hejaz, 436
Hedud-el-Harem, 480
Hellenes, 5, 290
Henjam, 144
Heraklea, 301, 334
Herat, 17, 53
Hergan-Kaleh, 303
Heri-rud, 28, 120
Hermon Mountains, 359
Hermus River, 269
Hesban, 407
Hezareh, 22, 44
Hierapolis, 188, 233, 270
Hilleh, 235
Hilmend River, 28
Hindieh Canal, 205
Hindki, 40
Hindu-Kush, 1, 19
Hisr-Sargon, 222
Hissarlik, 314
Hit, 235
Hodeidah, 477
Hofhof, 472
Homerites, 469
Homs, 383
Hor, Mount, 435
Hosn-Suliman, 391
Hullaniyah, 440
Huleh, Lake, 370, 372
Huzu, 219
Hymiarites, 469

Iassus, 335
Ibn-Sauds, 467
Iconium, 340
Ida, 260
Idalium, 349
Idumaea, 435
Iliats, 111
Ilgun, 302
Ilion, 315
Ilkas-dagh, 262

Indian Caucasus, 1
Injeh-su, 299
Ineboli, 301
Ionia, 244
Irak, Mount, 21
Irak-Arabi, 13
Iran, 75
Iranians, 76
Iris River, 262
Isbarta, 340
Iskanderun, 382
Iskelib, 300
Ismaelites, 379
Ismid, 261, 264, 309
Isnik, 309
Lake, 263
Ispahan, 134
Istalif, 47
Istakhr, 139

Jabul, Lake, 368
Jaffa, 424
Jagdalak, 24
Jaghatu River, 99
Jahri-Zadeh, 212
Jailan, 475
Jaji, 38
Jalalabad, 49
Jalk, 142
Jamrud, 49
Janik, 294
Jaulan, 362
Jarun, 144
Jask, 17, 142
Jebel-Abyad, 2
Jebel-Aja, 444
Ajlun, 362
Akhdal, 197
Akhdar, 442
Auliki, 439
Aziz, 197
Bukum, 92
esh-Shaik, 356
Faddhli 439
Faraui, 366
Fatlah, 442
Hamrin, 198
Harb, 435
Hauran, 359, 443
Harim, 443
Hassan, 439
Jarmuk, 3 0
Kasiun, 404
Katherin, 367
Kaur-Saiban, 439
Kern, 439
Khan, 439
Kharaz, 439
Kora, 437
Makmal, 358
Mar-Elias, 352
Missis, 247
Munneija, 366
Musa, 356, 367
Neba, 363
Nur, 247
Osha, 363
Selma, 445
Seman, 386
Shafah, 435
Shamshan, 439, 475
Shammer, 472
Tehamah, 435
Tih, 364
Toweik, 446
Tor, 360
Tsahura, 439
Jebel-Zebair, 460
Zebdani, 368
Zukur, 457, 460
Jeddah, 480
Jemshidi, 46
Jenin, 414
Jerabis, 232
Jerash, 406
Jericho, 412
Jerusalem, 416
Jews, 380
Jezireh, 207
Jezireh-ibn-Omer, 219
Jezreel, 361
Jihun, River, 276, 342
Joba, 448
Jof, 439, 482
Joppé, 425
Jordan River, 370
Josaphat Valley, 421
Julamerk, 180, 223
Jumjumah, 236
Juni Bay, 394
Jurd, 354
Jurah, 426

Kaaba, 472
Kabul, 17, 47
River, 26
Kahu-han, 231
Kachi-Gandava, 25, 59
Kadesh, 384
Kades, Lake, 385
Kadi-Koi, 309, 332
Kadmus, 385
Kafirs, 41
Kafir-Kalah Mountains, 120
Katlan-Kuh, 90
Kain, 122
Kais Island, 144
Kaisarieh, 298, 416
Kajars, 109
Kakars, 68
Kakar Lora, 26
Kakk, 120
Kaktuja, 325
Kalafat, 267
Kalah-nau, 123
Kalat, 71
Kalat-esh-Shufik, 370
Kalat-el-Bisha, 482
el-Hosn, 391
Kalat-Seman, 387
Kaleh-Diz, 150
Kalehjik, 299
Kaleh Sharghat, 226
Kaleh-Sultanieh, 313
Kalisa, 120
Kalipat, 60
Kalkot, 46
Kallinikon, 234
Kalloni, 318
Kallymnos, 255, 336
Kandahar, 17, 50
Kandili, 308
Kaniguram, 49
Kantara, 347
Kanzir-dagh, 246
Kapharnaum, 410
Kapikeren-Denizi, 272
Kaplan-alan, 258
Karabel-dagh, 246
Kara-bunar, 276, 326, 341
dagh, 80, 89, 252, 260
devlit, 258
hissar, 295
Karaja-dagh, 196 251
Karali-dagh, 260
Karalitis, 274
Karaman Island, 460
Kara-seka, 196
su, 163, 201
tash, 247, 278
Karkacha, 24
Karkemish, 232
Karin, 183
Karun River, 95
Karpasos, 347
Karpathos, 255
Kashan, 134
Kashkai, 109
Kash-rud, 28
Kasim, 445
Kasimabad, 118
Kasr River, 475
Kasr-Nimrud, 229
Kastamuni, 300
Kasvin, 130
Katakekaumene, 258
Katar, 453, 474
Kau-Keban, Mount, 438
Kauli, 111
Kawak, 21
Kazan-kaya, 262
Kaz-dagh, 260
Kazerun, 145
Kedron, 417
Kefar, 482
Kej, 73
Kelat-i-Ghilzaî, 50
Kelat-i-Nadir, 80, 120
Kelkit, 262
Kemakh, 184
Kenar-Gaz, 123
Keraira, Mount, 23
Kerak, 408
Kerassun, 295
Kerkuk, 225
Kerbela, 238
Kerkha River, 90, 116, 200
Kerki, Mount, 257
Kerman, 141
Kermanshah 148
Kermez-dagh, 246
Kerynia, 349
Keshir-dagh, 252
Keshchich, 261
Khabur, 196
Khaf, 122
Khaibar, 24
Khaifa, 414
Khalis, 206
Khamseh Mountains, 90, 151
Khanakin, 229
Khapur, 218
Kharan Desert, 64
Kharfah, 482
Kharoti, 39
Kharput, 188
Kharshut, 165
Khartaza, 20
Khaza-chai, 225
Khirtar Mountains, 61
Khivabad, 120
Khobar, 142
Khoi, 131
Khonas, 332
Khonsar, 134
Khora, 330
Khorassan, 93, 184
Khorramabad, 148
Khorsabad, 222
Khozail, 215
Khozdar, 71

Khur, 166
Khurd-Kabul, 24
Khusron-tepe, 120
Kifri, 226
Kiresun, 182
Kirind, 148
Kirkagach, 318
Kirkesion, 235
Kirman, 141
Kishm Island, 92, 144
Ki tim, 350
Kiutayeh, 305
Kizil-bashes, 40, 177
Kizil-irmak, 263
Kizil-robat, 200
Kizliman, 252
Koh-i-Baba, 22
Koh-i-Kwaja, 29, 31
Koh-i-Mutan, 60
Koh-i-Sabz, 59, 64
Koh-i-Surkh, 25
Kohistan, 22
Kohistani, 40
Koh-Malah-i-Siah, 59
Koh-Panj-Augusht, 26
Koja-chai, 266, 313
Kojez-liman, 273
Kolat-dagh, 166, 181
Komron, 142
Komana, 343,
Kongaver, 146
Konieh, 340
Kop-dagh, 165
Kophès, River, 26
Köpro-su, 276
Kora, 482
Korna, 207
Kos, 255, 336
Kos-dagh, 262
Koveit, 240, 472
Kozan dagh, 246
Krâ, 360
Krio, 255
Kuchan, 123
Kufa, 239
Ku ar, 376
Kuh-i-Dena, 92
Kuh-i-Hazar, 92
Kula, 258, 3.1
Kuleli, 308
Kum, 134
Kumisheh, 140
Kum-Kaleh, 267, 315
Kunar, 47
Kunar, River, 27
Kunjaz, 300
Kupa, 140
Kuram, 49
Kuram River, 27, 95
Kurds, 110, 174
Kusan, 55
Kushk-i-Nakud, 52
Kushan, 21
Kushites, 3
Kus-gunjuk, 308
Kut-el-Amara, 230
Kuyunjik, 220
Kwajah-Amran, 26
Kwatah, 70
Kyeban Maden, 188

Ladé Islands, 273
Ladik-göl, 26[illegible]
Lahej, 475
Lahijan, 125
Lahori Mountains, 20
Lain-su, 120
Lalpura, 49
Lamlun Marshes, 205
Lamurt-koi, 319
Lamsaki (Lampsacus), 313
Langherud, 88
Laodicea, 332, 388
Lar, 144
Larek, 142
Larnaka, 347, 350
Lastos, Mount, 255
Latakieh, 388
Latmos, Gulf, 272
Latzata, 327
Lazes, 173
Lebedos, 327
Lefké, 305
Leitani River, 369
Leja, 359
Lejim, 414
Lengherud, 125
Leontes, River, 360, 369
Leontopolis, 234
Leros, 255
Lesbos Island, 318
Levantines, 293
Levké, 268
Levkosia, 349
Libanon, 356
Limassol 3[illegible]0
Lindos, 338
Linjah, 144
Lisan, 72
Lith, 457
Logar, River, 26
Loheiyah, 477
Lohani, 39
Lora, River, 64
Lowa, 474
Ludd, 424
Luri, 69, 110, 174
Luftabad, 119
Lut or Loth Desert, 94
Lycia, 254
Lycaonia, 340
Lycus, River, 262

Maarah-eh-hoaman, 385
Madain, 229
Machaera, 3[illegible]9
Madan, 215
Madara-dagh, 260
Maden-Khapur, 218
Madhim, 229
Madian, 434, 436
Magarah, 365
Magharat, Mount, 218
Magnesia, 323
Mahan (Mahun), 142
Mahra, 469
Mahsuds, 39
Maibut, 140
Makalla, 475
Makheras, Mount, 346
Makin, 49
Maku, 131
Makri, 338
Malays, 480
Malatia, 201, 230
Malekites, 380, 479
Maltai, 222
Mal-tepe, 309
Manasha, 477
Manavgat, 2[illegible]2, 276
Mandayeh, 216
Manfuhah, 482
Mangals, 38
Manissa, 323
Manissa-dagh, [illegible]
Manyas, Lake, 266
Marash, 34[illegible]
Maragha, 131
Marand, 131
Mardin, 234
Mountains, 196
Mareb, 477
Margat, 391
Mariaba, 477
Marmora Archipelago, 261
Sea of, 261
Maronites, 379
Martyropolis, 219
Mascat, 441, 473
Mashita, 407
Masirah Island, 440
Masis, Mount, 1
Masen-dagh, 263
Massiad, 385
Mastuj, 20, 27, 47
Mayadim, 235
Maya-Farkein, 219
Mazaca, 299
Mazanderan, 86
Mazgherd, 188
Mazret-i-Baba, 22
Meander River, 269
Mecca, 478
Medes, 108
Medina, 480
Medinet-en-Nebas, 477
Megdcha, 475
Meghiddo, 361
Mehrab-dagh, 196
Mekran, 62
Melas, 276
Melassa, 335
Meles River, 326
Melezgherd, 185
Melkites, 380
Menamah, 472
Mendelia, Gulf of, 335
Mendereh River, 266
Menemen, 323
Menjhil, 126
Merinereh Lake, 268
Town, 321
Merom, Lake, 371
Merzifun (Merziwan), 297
Mersina, 341
Mesjid-el-Haram, 479
Meshed, 117
Meshed-Ali, 239, 475
Meshed-i-Murghab, 139
Meshed-i-Ser, 125
Meshkid, 142
Meshkid, River, 61, 64
Meskakeh, 482
Mesopotamia, 192
Mesorea, 349
Metdesis Mountains, 248
Metuali, 379
Mezereh, 188
Mianeh, 130
Miankalai, 46
Midyat, 234
Mihail, 477
Miletus, 333
Minab (Minao), 142
Minara, 339
Minuah, 475
Mirbat, 475
Mirbat Bay, 475
Messoghis Mountains, [illegible], 257
Moab, 363
Moghrabines, 480

Mohammedabad, 119
Mohammerah, 151, 240
Moharek, 472
Mojib, 362
Moka, 477
Momunds, 38
Montefiks, 216, 466
Morfu Bay, 349
Mossul, 220
Mubarrez, 472
Mudania, 311
Mula, 67
Murad River, 163
Murd-ab, 88, 126
Murgh-ab River, 22, 28
Musta-Ariba, 469
Mush, 186
Mycale, 257
Myonte, 333
Mytilini Island, 260
    Town, 317

Nublus, 414
Nahr-el-Arwa, 368
Nahr-Afrin, 368
Nahr-el-Arus, 369
Nahr-el-Asi, 367, 369
Nahr-el-Dahab, 368
Nahr-el-Kadi, 396
Nahr-el-Kebir, 369
Nahr-el-Kelb, 395
Nahr-el-Leddan, 371
Nahr-el-Leitani, 369
Nahr-el-Mukattah, 361
Nahr-Ibrahim, 369
Nahr-Kadisha, 369
Nahr-Kasimiyeh, 360
Nahr-Sebti, 369
Nahr-Zerka, 375
Nain, 140
Naizar, 29
Nakhl, 144, 428
Nakil-Lessal, 438
Nalli-Khan, 305
Nangnahar, 27
Nasar, 39
Nasirabad, 123
Nauri, 376
Nazareth, 412
Nazik, Lake, 167
Nebo, Mount, 363
Nefud, 447
Nehavend, 147
Nejed, 434
Nejef, 205, 238
Nejefabad, 134
Nem-shehr, 299
Neo-Khori, 315
Nestorians, 179
Neswah, 475
Nicæa, 266, 309
Nicomedia, 309
Nigdeh, 341
Nicosia, 349
Nikaria Mountains, 257
Niksar, 295
Nimshah, 43
Nimrud-dagh, 196
Ninfi, 323
Niniveh, 220
Niris, 100
    Lake, 100
Nisab, 475
Nishapur, 120
Nisib, 231
Nisibin, 234
Nisyros, 255

Nisyros Island, 255
Nosairi, 114, 377
Nubians, 480
Numri, 67
Nuskan, 20
Nymphi, 323

Oedemish, 329
Of, 180
Ohod, 481
Okeir, 472
Olivet, Mount, 421
Olympus, Brussa, 261
    Troodos, 346
Oman, 473
Oman Mountains, 441
Omar, 482
Oneizah, 482
Orfa, 233
Ormuz, 2, 142, 143
Orontes, River, 367
Osmanjik, 300
Oyuk, 300

Pactolus 322
Paghman Mountains, 21
Paiwar-Kotal, 24, 25, 33
Palæo-Limisso, 350
Palaio-Kastro, 331
Palandöken, Mount, 164
Palatia, 333
Paleo-Tyr, 399
Palestine, 353
Pallacopas, 212
Palmyra, 405
Palu, 187
Pambuk-Kaleh, 270
Pamphylia, 273
Pandermos, 312
Panjir River, 26
Panjkora, 27
Panormos, 312
Paphos, 351
Parsis, 108, 112, 476
Parapomisus 22
Parsivan, 107
Paryadres Mountains, 165
Pashang, 26
Patara, 273, 339
Patmos, 257, 331
Pedias, River, 347
Pergamus, 318
Perim Island, 439, 460
Peristerides Islands, 319
Perli-dagh, 163
Persepolis, 139
Persia, 75
Persian Gulf, 454
Persians, 104
Peshawar, 16
Petra, 408
Pharan, 366, 428
Pharash, 290
Pharaziotes, 290
Pharphar, River, 368
Phellus, 339
Phenika, 340
Philadelphia, 321, 407
Phinika, 276
Phocæa, 319
Phœnicians, 5, 469
Pinara, 339
Pion, Mount, 329
Pirgul, Mount, 26
Pishin, 26
Pompeiopolis, 300, 341
Porphyrion, 398

Povindahs, 39
Prion, Mount, 329
Provençal Island, 252
Prusium, 311
Pukhtun-Khwa, 33
Puna, 469
Punt, 469
Pursak River, 305
Pusht-i-Kuh, 198
Pyramus River, 276

Quetta, 70

Rabba, 407
Rabbath-Ammon, 401
Rabbath-Moab, 407
Radkan, 118
Rahaba, 235
Raj-Ram-Chander, 63
Rakka, 234
Ramleh, 424
Rapana Mountains, 257
Ras-el-Abiad, 398
Ras-el-Ain, 399
    Hadd, 433, 440
    Kelb, 439
    Khanzir, 387
Ras-Tartak, 440
Rasheya, 409
Rashiyeh, 475
Ras-Masandam, 433
Ras-Mohammed, 364
Rass, 482
Ravah, 235
Rayin, Rayum, 142
Red Sea, 456
Reig-Rawan, 22, 93
Resht, 125
Red Desert, 465
Revandoz, 225
Rhai, 127
Rhodes, 336
Riad, 482
Rigan, 142
Riha, 385, 412
Rishehr, 145
Ritra, 327
Rizeh, 180
Rodwa, Mount, 437
Rowandiz, 225
Ruad, 390
Rudbar, 126, 148
Rudi-Sabzawar, 28
Rum-Kalah, 231

Saba, 477
Sabanja Lake, 264
Sabians, 216
Sabæans, 469
Sadiyeh, 138
Safa Mountains, 359
Safed, 411
Safita, 391
Safsafeh, 367
Sagaris, 264
Saïda, 396
Saint Eliah, 257
    John of Acre, 413
Sakaria River, 264
Sakhra, 418
Saklaviyah, 207
Salahiyeh, 225, 404
Samanlu-dagh, 261
Samara, 227
Samaria, 415
Samava, 240
Samnan Mountains, 86

Samos, 331
Samosata, 231
Samsun, 297, 333
Samsun-dagh, 257
Sana, 476
Sapan Mount, 167
Sapor, 145
Sapphire Mount, 482
Saracens, 468
Sar, 343
Sarai-koi, 333
Sarakhs, 120
Sardis, 322
Sarepta, 398
Sarfend, 398
Sarhad, 92
Sari, 125
Sari-chai, 335, 321,
Sartçreh, 343
Sarts, 107
Savad-Kuh, 82
Sarus River, 276
Savalan Mount, 89
Sazlik, 164
Scala Nova, 327, 330
Scamander River, 266
Scutari, 308
Sebzewar, 122
Sebaste, 415
Sedeir (Sidr), 416
Sefid-Koh, 22, 23
Sefid-rud, 86
Sehend, Mount, 89
Seiban, Mount, 167
Seihun, River, 276
Seimarah, 148
Sekuha, 123
Sekran, 72
Selah, 408
Seleucia, Mesopotamia, 229
 Syria, 387
Semites, 107
Semnan, 127
Senna, 146
Serbal, Mount, 366
Sermin, 385
Sert, 219
Sesamyus, 301
Sevri-dagh, 250
Sevri-hissar, 303, 327
Shab, 215
Shabin-Kara-hissar, 295
Shafites, 479
Shah-Jehan, 81
Shah-Kuh, 82
Shah-Kuh-bala, 82
Shah-rud, 81, 126
Shah-seven, 109
Shakra, 482
Shamsherbur, 82
Shammar, 214
Shankar-dar, 46
Shapur, 145
Shar, Mount, 435
Sharjah, Sharkah, 475
Sharon, 376
Shat-el-Arab, 211, 240
Shehr, 49, 475
Shehr-i-Rogan, 72
Sheikh-el-Jebel, 359
Sheikh-Othman, 476
Sheikh-Said, 476
Sheikh-Tabrisi, 125
Shemiran, 129, 189
Shemsieh, 177
Sher-dahan, 26
Sherpur, 48
Shibam, 475
Shibr, 21
Shiahs, 14, 114
Shinaz, 474
Shiraz, 137
Shir-Kuh, 92
Shirwan, 123
Shugra, 475
Shulut, 42
Shuster, 150
Shutar-gardan, 24
Siah-Koh, 22, 24, 25
Siah-Kuh, 93
Siah-Posh, 2, 41
Sibi, 71
Sibzawar, 52
Sidon, 396
Sichem, 414
Sighajik, 327
Sihun, River, 276, 342
Sikaram, Mount, 23, 24
Siloam, 417
Siman, 312
Simois, River, 266
Sinai Peninsular, 353, 363
 Mount, 366
Singali, Singar Mount, 197
Sinope, 300
Sippar, 238
Sipylus, Mount, 258
Siraf, 144
Sirah Island, 475
Sirdarud, 130
Sirwan, 148
Sirhan River, 482
Sis, 343
Sistan, 29, 122
Sivas, 297
Smyrna, 323
Socotora, 475
Sodom, 373
Soghlu, Lake, 275
Soham, 474
Sohar, 474
Sokia, 333
Soleyel, 482
Soli, 341
Soma, 318
Somalis, 476
Sonmiani, 71, 72
Spanides, 381
Soveid, 474
Spin-ghur, Mount, 23
Stavro-Vuno, 346
Steamer Point, 475
Suedieh, 387
Suez, 428
Sueideh, 405
Suk-esh-Shiok, 216, 240
Suk-el-Basir, 475
Sulaiman-dagh, 19, 25
Suleimanieh, 229
Sultanabad, 122, 134
Sultan-dagh, 252
Sultanieh, 136
Sunnites, 14
Suri River, 25
Surkh-koh, 25
Sumu, 142
Sur, 475
Sur (Tyre), 398
Suryian, 215
Susa, 148
Susurlu-chai, 266
Suverek, 231
Suzuz-dagh, 252
Swat, 27
Swati, 38
Syme, 255
 Island, 255
 Gulf, 255
Syrias, Cape, 301
Syria, 353
Syrians, 376

Tabariyeh, 410
Tabor, Mount, 360
Tabriz, 130
Tadmor, 404
Taif, 480
Taimuri, 45
Tajiks, 19, 40, 107
Takatu, 26, 60
Takht-i-Sulaiman, 132
Takht-i-Sulaiman, Mount, 26, 84, 99
Takht-i-Balkhis, 132
Tak-i-Bostan, 148
Talish Mountains, 89
Tall, 46
Tambuk, 270
Tandurek, Mount, 90, 166
Tarabulus, 182, 391
Tari, Tarim, 68, 475
Tarnak River, 28
Tarun, 144
Tarruah, 46
Tarsus, 341
Tarsus-chai, 276, 341
Tash-Köpri, 300
Tasht, 100
Tats, 107
Taurus Mountains, 246
 Cilician, 246, 247
 Isaurian, 246, 251
 Lycian, 246, 252
Tebbes, 94, 122
Tehama, 434, 435
Teheran, 127
Tejen River, 120
Tekrit, 209, 227
Tell-Abu-Tumeis, 359
Tell-Assur, 362
Tell-el-Kadi, 371
Tell-Ermen, 234
Tell-Hum, 410
Tell-Mohammed, 229
Tell-Nebi-Mendeh, 384
Tell-Loh, 230
Telmessus, 339
Tenedos, 261
Tengsir, 91
Teos, 327
Tere-Kameh, 175
Termeh River, 263
Thal, 21
Thyra, 329
Tiberias, 410
 Lake, 372
Tigani, 330
Tigranocertes, 234
Tigris, 199
Tilar, River, 83
Tiran Island, 435
Tihran, 134
Tirband-i-Turkestan, 22
Tireboli, 182
Tirich-mir Mount, 20
Tium, 301
Tlos, 339
Tmolus Mount, 257
Tochal, 84
Tokat, 295
Tokma-su, 201
Topra-Kaleh, 184, 190

Tor, 428
Tortosa, 390
Tortum-su, 164
Tosanli-su, 262
Tralles, 333
Trachonitis, 359
Trans-Jordan, 362
Trebizond, 180
Tripoli, 182, 391
Troad, 316
Troodos 346
Troy, 315
Tucrij, 238
Tunguses, 7
Turanians, 3
Tun, 122
Tura-jelu, 198
Turbat-Sheikh-i-Jami, 120
Turbat-i-Haidan, 122
Turi, 38
Turkhal, 295
Turkmanchai, 130
Turkomans, 285
Turks, 109, 172, 286
Turkey in Asia, 162
Tuz-göl, 264
Tuz-Khurmapli, 226
Tuzla-su, 267
Tyana, 341
Tyre, 5, 396, 398

Uchak, 331
Uch-göl, 199
Uch-Kilissa, 184
Uch-hissar, 299
Ujek-tepe, 315
Ulash, 298
Um-Alowi, 367
Umm-Keis, 406
Unah, 21
Unieh, 294
Ur, 238
Urfa, 233
Urgub, 299
Urmiah, 131
  Lake, 97
Uskub, 302

Van, 188
  Lake, 167
Vani-Koi, 308
Varia, 320
Vathy, 331
Veramin, 127
Viran-shehr, 302
Vizir-Köpri, 300
Vona Liman, 295
Vrontados, 327
Vurlah, 327

Wad-Ali, 203
Wady Dowasir, 482
  Feiran, 364
  Hajar, 439
  Kasr, 475
  Mossileh, 475
  Musa, 408
  Sirhan, 482
Wahabites, 14, 471
Warka, 238
Waziri, 38
Wed-el-Ermek, 452, 482
Wed-Mokattab, 365
Wej, 482
Woshem, 482
Wusut, 358

Xanthos, 267, 339

Yafia Mountains, 439
Yali Island, 255
Yambwa-el-Bahr, 482
Yambwa-el-Nakhl, 482
Yambo, 482
Yamuneh, Lake, 369
Yarmuk River, 362
Yasun-burun, 166
Yatreb, 480
Yemen, 438
Yeni-shehr, 311, 315
Yenij-Fokia, 319
Yeshbum, 475
Yeshil-dagh, 251
Yeshil-Irmak, 262
Yezd, 140
Yezdikhast, 140
Yezides, 177, 215
Yildiz-dagh, 262
Yuruks, 284
Yusuf-Zai, 37
Yuzgat, 299

Zab River, 199
Zafaran-boli, 301
Zagros Mountains, 90
Zahleh, 399
Zahrawan, 185
Zain-Merka, 407
Zamantia-su, 247
Zamindawar, 28
Zanzibar, 474
Zaza, 176
Zehr, Zehri, 71
Zelibi, 235
Zemzem, 479
Zendeh-rud 136
Zenjan, 130
Zenobia, 235
Zerin, 367
Zerni, 55
Zigurat, 222
Zigrit, 215
Zilleh, 295, 341
Zirreh, 29
Ziza, 407
Zobeir, 215, 240
Zohreh, River, 95

THE END.